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ORIGINAL ARTICLES.

SUTURING THE HEAD OF THE HUMERUS TO THE ACROMION IN OLD SUBCORACOID DISLOCATION.[1]

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THE patient, an engineer forty-three years of age, was run over a little more than six months ago and was treated by a druggist for contusion of the right shoulder until the early part of November. On November 9th, when I saw the patient for the first time, I found the shoulder much flattened and the acromion unduly prominent (Fig. 1). The joint-cavity was empty and the

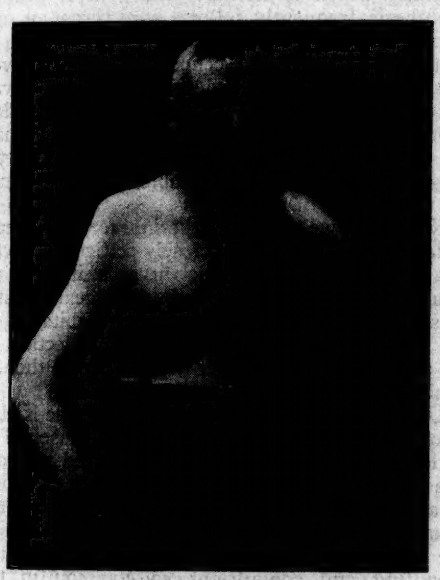

Fig. 1. Right subcoracoid dislocation.

head of the humerus could be palpated in Mohrenheim's groove. The arm was slightly shortened, the motion of the arm greatly impeded, and the patient suffered from intense periodical pain, which seemed to be dependent upon nerve-pressure.

The Roentgen rays revealed the typical signs of subcoracoid dislocation (Fig. 2). At the anterior surface of the neck of the scapula a thickened area was noticed, which made me suspect that there was a coinjury of this portion, but the skiagraph showed the bones to be intact. As the operation proved afterward, the thickened portion which might have corresponded to callus-formation was caused by the presence of frag-

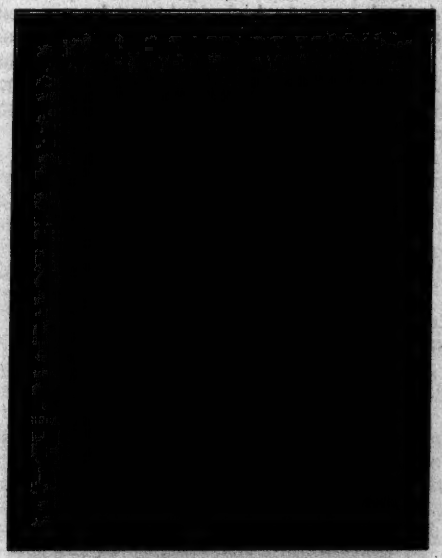

Fig. 2. Subcoracoid dislocation.

ments of the glenoid capsule which had formed an irregular mass.

After various methods of reduction were tried

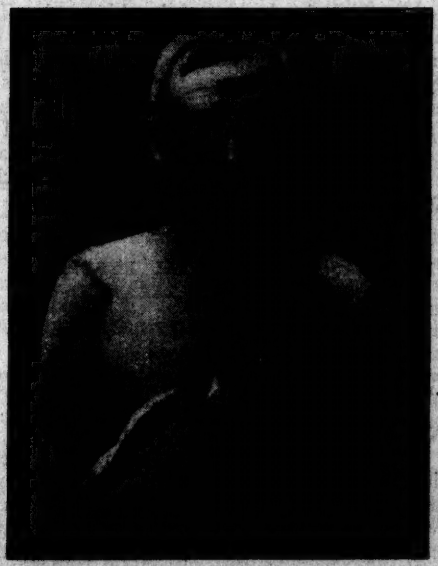

Fig. 3. Dislocated humerus reduced.

[1] Case presented before the Surgical Section of the Academy of Medicine, December 9, 1901.

in vain under anesthesia, a nearly semilunar incision was made which began at the acromion and running over the intertubercular sulcus was extended vertically alongside the anterior surface of the arm (Fig. 3). Thus both the joint and the acromion were exposed. After extensive and careful dissection of adhesions I succeeded in rotating the head of the humerus in its glenoid cavity. There was a pronounced tendency to forward displacement which could not be overcome by additional exposure. Therefore, I fastened the head of the humerus in the cavity by suturing it to the acromion after having drilled a hole

Fig. 4. Dislocated humerus kept in place by silver wire.

through the acromion as well as through the head of the humerus. On boring the head was found to be very soft, a fact which was also illustrated by the light shadow of the skiagraph. The skiagram (Fig. 4), taken two weeks after the operation, showed the humerus in good position. There was no reaction and the result appears to be secured. It seems to me that this procedure is far preferable to the resection of the head of the humerus, as advised by so many surgeons. No force being required, laceration of muscles, blood-vessels and nerves is easily avoided.

DIPHTHERIA; WITH SPECIAL REFERENCE TO THE SYMPTOMS AND TREATMENT.[1]

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NO ONE is aware, more fully than myself, of the great amount of literature on this disease which has been placed before the medical public. Many of the articles have been excellent, showing careful observation and scientific research, many more, on the other hand, have shown either knowledge born of small experience, or a total ignorance of the subject. On account of the latter I feel amply justified in offering a few thoughts suggested by a somewhat extended experience with this disease.

As my attention will be given largely to the symptoms and treatment, I will be brief in the discussion of the other phases of the subject, touching only on such points an accurate knowledge of which is necessary to a rational treatment of the disease. I will mention the pathology only incidentally.

Diphtheria is an acute, infectious and contagious disease, of which the most constant manifestation is the formation of a pseudomembranous deposit, usually on a mucous surface. There is also a toxemia accompanied by certain characteristic constitutional disturbances arising therefrom.

The etiology of diphtheria may be considered under two heads, predisposing and exciting. Under the first head, predisposing, may be placed anything which undermines the general health. Diphtheria frequently follows sore throat or exhausting diseases and conditions, being often a complication of convalescence from scarlet fever and measles. Formerly defective plumbing was considered a prominent predisposing factor. This is probably true, however, only in so far as it may cause a simple or more frequently a saprophytic angina which becomes a suitable culture-medium for the growth of the bacillus.

Naturally we find diphtheria more frequent, and in fact endemic, in closely-settled districts, but, unlike most contagious diseases, it is by no means rare in outlying and suburban localities and is sometimes found among the inhabitants of the islands of the sea. The age of selection of the germ seems to be under the tenth year, though adults are by no means exempt.

Under the second head we may place the Klebs-Loeffler bacillus as the sole exciting cause. The period of incubation is variously stated at from one to seven days. Seven days, I think, is somewhat long; one to three days being about the usual period. I know of one instance in which the incubation was less than twenty-four hours. Vomiting and convulsions, so common in the eruptive diseases, are rare, convulsions being very unusual. Even an initial chill is uncommon. There is sometimes a period of malaise, but the attention is usually called first to a difficulty in swallowing or to a pain at the angle of the jaw, or to an enlargement of the submaxillary or anterior cervical glands. The temperature ranges from 100° to 103° F., but more frequently remains nearer 100° than 103° F. The temperature is apt to be higher at first than at any other time of the disease (except in the event of complications), and, as a rule, when the patient comes under our notice the temperature is rarely over 101° F. The pulse, however, is usually very rapid from the first, showing a rapidity of absorption of toxins which is probably unequaled in any other disease. This disproportion of pulse and

[1] Read before the Norfolk (Va.) Medical Society, Nov. 12, 1901.

temperature forms one of the most valuable diagnostic features of the disease.

The most prominent local symptom, of course, is the presence of the pseudomembranous deposit, which is situated most frequently at the junction of the tonsils with the soft palate. In mild and simple cases the membrane remains in this situation, and may be so slight as to resemble strongly a follicular tonsillitis—so much so in fact that it may puzzle the most expert clinical diagnostician. The only safe method of diagnosis in such cases is the culture. Hence, the importance of an early culture in all cases in which there can possibly be any doubt. In more severe cases the membrane extends to the velum, over the whole tonsil, to the posterior pharyngeal wall, nasopharynx, nares or larynx, through the lacrymal duct to the conjunctiva of the eye. The membrane may be primary in any of these situations or may be there only by extension. The most serious localities for the formation of the membrane are the larynx, nose and eye, each of which calls for special local treatment. There is also a form of diphtheria which is characterized by a serosanguineous discharge from the nose.

I am fully aware that there is a great weight of opinion against the probability that this form is of a true diphtheritic nature. But in the light of experience with a large number of cases occurring during an epidemic, I am able to present the following evidences of its genuineness: (1) The Klebs-Loeffler bacillus (or the pseudo form or both) is always found in the discharge. (2) All the constitutional symptoms of true membranous diphtheria exist in this type. (3) It is capable of infecting others with the membranous form of the disease. (4) It is cured by antitoxin.

The odor of the breath of a patient suffering with a severe form of diphtheria is characteristic, and once smelt is never forgotten. The cervical adenitis, which is so common a symptom, rarely seen when there is a pure infection from the Klebs-Loeffler bacillius, is almost invariably seen when there is mixed infection, which is generally the rule. The enlarged glands, however, rarely suppurate.

Authorities have endeavored to distinguish between the constitutional symptoms of the pure form and those of the mixed infection, but no distinction has been made which is of diagnostic value. The mixed infections, however, are much more severe and probably play an important part in the so-called malignant cases from which arises that much dreaded condition "sepsis."

The urine frequently contains albumin, but to a much less extent than is the case in other febrile conditions, especially the eruptive fevers. Certainly I have not found it often enough to warrant its being classed as a symptom.

I mentioned the peculiar ratio between the pulse and the temperature. This is pathognomonic. A sudden change in this relation, however, portends danger. A pulse suddenly becoming slow and irregular indicates a rapidly-failing heart. Also a steady rise in temperature, which cannot otherwise be accounted for (pneumonia, etc.), usually means the setting in of the "septic condition" just mentioned and is an almost sure forerunner of death.

The more severe forms differ from the foregoing in the following particulars: There is, of course, a more extensive membrane, partly or wholly covering, as has been said, the tonsils, pharynx, nasopharynx or lining the nose. The discharge of mucus is profuse from all of these surfaces. Hemorrhage from the mucous surfaces, especially from the nose, is not uncommon and may become alarming (hemorrhagic form).

The severity of the constitutional symptoms is in direct proportion to the extent of the membrane, which may spread with exceeding rapidity, the system becoming rapidly overwhelmed by the poison until the patient is sometimes beyond hope within twenty-four hours from the first appearance of the exudate. This degree of rapidity is fortunately rare.

The symptoms, as a rule, develop gradually, progressively showing marked prostration, a rapid and feeble pulse, and usually stupor, but there may be extreme restlessness and at times even delirium. The temperature in these extreme cases is variable, ranging from normal to 105° or 106° F., sometimes in the worst cases being low and at other times high from the start. As I have mentioned before, the malignant and septic cases are usually a mixed infection with the streptococcus. In these cases it is not so uncommon to find nephritis, which, however, in itself rarely causes death.

A fatal termination of a septic case is preceded by a rapidly-failing heart and extreme prostration, neither of which improves under stimulation, disturbed respiration (aside from croup cases) and consequent cyanosis, and vomiting and diarrhea. Death from diphtheria usually results from an overcoming of the system by the toxemia (asthenia), cardiac failure, directly due to the action of the poison on the muscle (parenchymatous degeneration) and nerves (paralysis) of the heart, and from asphyxia as in croup. Of course any of the numerous complications may cause death.

Membranous Croup.—When I speak of membranous croup I refer to it only as a specific diphtheritic infection. Very rarely non-diphtheritic membranous croup has occurred, cases having been reported by several eminent and undoubted authorities. But its extreme rarity is admitted by all, hence the importance of taking no chances and of treating all cases as true diphtheria.

The development of membranous croup is usually gradual, but, unlike the spasmodic variety, steadily increases in severity. For the first day we may have little more than gradually-increasing hoarseness, the ratio between pulse and temperature not being so constant as in the other forms of the disease; but during the following twenty-four hours the breathing becomes forced, rapid and harsh, the little patient bringing into

use all the accessory muscles of respiration, the suprasternal, supraclavicular, epigastric and intercostal regions becoming depressed with each respiration; the patient becomes more and more restless until the efforts and struggles to obtain air are distressing to witness. The lips and fingers become blue, the child rapidly sinks into a half conscious condition, the violent efforts to breathe cease, the color becomes ashy, the pulse weaker and weaker, and, finally, death ensues. In the more fortunate cases under early treatment by antitoxin, these symptoms, instead of reaching the stage of unconsciousness, gradually subside in reverse order to the above. When antitoxin is not administered soon enough, relief has to be given through the use of the laryngeal tube.

By far the most frequent complication of diphtheria is bronchopneumonia, occurring in a large percentage of croup cases and especially in tracheotomy cases, thus constituting one of the chief objections to that operation. Otitis is not so frequent as in scarlet fever and measles. Pericarditis is fairly common. One of the most alarming complications and one which is sometimes very hard to control is nasal hemorrhage. Vomiting and diarrhea may be troublesome. The paralyses are the most constant of the sequelæ. The most frequent of these is the paralysis of the soft palate, causing regurgitation of food. The pharyngeal muscles are also affected, and peripheral neuritis is not at all rare in the serious cases.

Treatment.—The treatment of diphtheria may be considered under two heads, local and general. Briefly, in uncomplicated cases the local treatment consists of irrigation and the administration of antitoxin and stimulants.

Formerly, strong antiseptics, both in solution and in the form of powder, were applied to the membrane, which was then removed either mechanically or chemically. Antiseptics locally applied have been shown by careful experiments to exert their influence for so short a time as to be practically useless either in preventing the spread of the membrane or in preventing a further absorption of the toxin. In order to disinfect the membrane it would be necessary for the disinfectant to penetrate it; this it is unable to do. In order, therefore, that the disinfectant should prevent the further absorption of toxins, the membrane would have to be removed forcibly. This procedure is deemed wholly inadvisable in the light of modern scientific research, for the following reasons: The membrane is formed from within outward by a necrosis and fibrinous exudate, the direct result of the action of the bacilli, thus forming a closely-matted and tough mass of dead cells and fibrin, which acts as a barrier against the bacteria always present in the mouth. Hence, when the membrane has formed we have an intoxication only from the bacilli originally present and causing the membrane; when it is forcibly removed, however, a raw surface is left which affords a ready entrance to new bacteria and their toxins and which with the pouring out of fibrin, which at once takes place, again forms a fresh culture-medium for these bacilli and causes a new infection. On the other hand, Nature separates the membrane by forming a new mucous membrane beneath it as the body overcomes the poison, thus protecting it from a fresh infection. Then, as the false membrane peels up, it gives a direct indication of improvement and forms one of the most valuable guides to the further treatment. From this we see that the poison must be combated from within and not locally; hence the modern treatment by antitoxin and stimulation.

Nothing remains to-day of local treatment save irrigation systematically performed with hot salt solution. The object of this is two-fold: First, to remove the loose pieces of detached membrane as it exfoliates in the process of repair; second, the heat of the irrigating fluid greatly alleviates the accompanying inflammation of the pharynx and reduces the consequent swelling.

In order to irrigate, the child should be wrapped, from the shoulders down, in a sheet which is pinned closely so as to render the patient entirely helpless. The child is then placed on its back on a table, with the head turned to one side, a rubber sheet is placed around the shoulders and a Kelly pad beneath the head. The left hand of the operator is placed on the child's head in order to keep it still and the long nozzle of a fountain syringe is introduced into the mouth (along the inner surface of the jaw if necessary to open the mouth by force) and the irrigation performed intermittently. This is done in order to give the patient an opportunity to spit out the water, thus avoiding choking. The only objection that has been raised to irrigation is that it sometimes causes middle-ear disease. But of this there is no proof. In nasal cases the same method is used except that we employ the short blunt tip of the syringe. When the membrane is so large as to plug the nose we have recourse to the hand bulb syringe. The temperature of the water used should be from 110° to 130° F., depending on the local pain and swelling. In urgent cases irrigation may be employed every hour for some time, but usually three to four times a day is sufficient.

In no disease have we a more certain specific than in diphtheria. No unprejudiced observer can compare the statistics of the present day, taken at random from any large hospital, with those of the pre-antitoxin days and not be convinced of the efficacy of antitoxin. Two important factors are necessary to the successful treatment of diphtheria—an early diagnosis and a sufficiently large dose of antitoxin. The first of these must be secured by a careful watch over all sore throats and hoarse voices and an early appeal to the culture. As regards the second factor, the initial dose of antitoxin should rarely be less than 2,000 units, and in moderate cases, if there be not marked improvement within twenty-four hours, this dose may be repeated without injury. In more severe cases my initial dose is from 3,000 units in children to 4,000 or 5,000 in adults. It

has been demonstrated that antitoxin in large doses has no bad effect and it is therefore better to administer a large quantity than to hesitate through timidity and thereby attain no results. Usually the improvement begins to be manifest within thirty-six hours after the administration of the first dose. The first indication of improvement is shown in the arrest of a spreading membrane, and almost at once the edges of the exudate begin to exfoliate, the constitutional symptoms subside, the temperature, if high, drops and the patient's condition is generally improved. The pulse is somewhat slower to improve, but this improvement is gradual and steady. When the patient is specially restless morphine is the drug to be relied upon.

Stimulation, next to antitoxin, is the most important part of the treatment. Whisky I think is the best agent, certainly in the earlier stages of the disease; later, and particularly when there are paralyses, strychnine is of value. A rapid and weak, or an intermittent pulse calls for immediate action; absolute rest secured if necessary by morphine and active stimulation are required. Forced nutrition may be necessary, as the patient frequently refuses all food.

The various complications of the disease are treated as if they were primary conditions. Otitis media calls for early incision of the drum, but both this and the eye infection call for the aid of a specialist.

In the treatment of croup so much depends on the exercise of careful judgment and a wide experience with the condition that it is difficult to make any definite statement. An early diagnosis and a sufficient dose of antitoxin go a long way toward the prevention of operative interference. When the breathing becomes labored, steam inhalations may be tried. The croup-kettle is practically useless with children; in these cases a small close room, a large amount of steam and a quiet patient (morphine) are necessary to the successful employment of steam. Poultices sometimes work well, but often irritate the patient; in order that they may do any good whatever they must never be allowed to become cold. Emesis, I think, as a rule is too depressing and is seldom followed by the desired result, the expulsion of the membrane. In order that the membrane be expelled in this way, it must be loose and this naturally occurs toward the end of the attack, hence it is not practicable during the early stages. We come then to operative procedure, too often only resorted to as a last hope and for that very reason often failing to save patients in whom, had it been employed earlier, good results might have been obtained.

I shall not discuss the relative merits of the two operations, tracheotomy and intubation. Personally I prefer the latter, for there is only one condition in which the cutting operation is superior to intubation and that is when the membrane has extended lower than the intubation tube will reach, and often in these cases it has also extended beyond the reach of the tracheotomy tube.

We must be exceedingly careful and be sure that interference is absolutely necessary, for, despite the evident benefits to be derived from the procedure, it must be remembered that it also has its dangers. The presence of either tube is a source of irritation to the patient, the temperature almost always rises after its introduction, sometimes quite high, the nervous system being severely tried, and, above all, there is the ever-present danger of bronchopneumonia, but I can safely say that the frequency of this complication after intubation cannot compare with that of tracheotomy.

The color and pulse are the two best indications of the necessity for the use of the tubes. When other measures have been tried and have failed to give relief to the breathing and the pulse becomes rapid and weak, intubation should be performed immediately. If we find a patient resting apparently, but with a weak pulse, we judge that the efforts at breathing have been severe and prolonged and that the apparent rest is but exhaustion. A continued cyanosis without an indication of improvement calls for immediate relief.

In conclusion, let me say that especially in private practice it is better to insert a tube before it is actually needed than to postpone interference until the patient is beyond hope.

As a rule, a child can drink milk from a cup during the whole stay of the tube, but when this cannot be done resort may be had to the reclining posture, the head lower than the body, the child nursing from a bottle while in this position. On the whole, I think that when a patient cannot take nourishment in the ordinary way, and especially when there is regurgitation, we had better resort to gavage, the tube being passed preferably through the nose.

In post-diphtheritic paralysis, when this is general, systemic and general tonic treatment, including strychnine, which according to some exerts a specific influence, is about all that can be given. When the paralysis is limited to single muscles or groups of muscles, the faradic current is very beneficial.

ACUTE PELVIC SUPPURATION; ITS CONSERVATIVE TREATMENT.[1]

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IN discussing this subject I will confine myself to a consideration of the causation and treatment of acute suppurative processes occurring within the tubes, pelvic peritoneum and cellular tissues about the pelvis, and will attempt to show that by the early recognition and timely evacuation of septic foci the sexual organs of the woman may be functionally preserved without exposing her to the risks of a major operation. The uterus forms the main avenue for infection and

[1] Read before the Kings County Medical Association, Oct., 1901.

there are certain periods which increase its susceptibility to attack by pathogenic organisms. These periods may be classed as post-abortal, post-partal, menstrual and post-menstrual. The lymphatics form another and even more available channel for the passage of pathogenic and pyogenic cocci. Lacerations and abrasions in the utero-vaginal tract permit their entrance and when once admitted their progress is rapid.

The gonococcus, staphylococcus, streptococcus, colon bacillus and tubercle bacillus are the principal organisms which invade the pelvis. It is doubtful if suppurative peritonitis is ever caused by either the colon bacillus or the tubercle bacillus acting alone, unless there has been a primary inflammation of either the colon or the appendix accompanied by extreme distention of the bowel or a mixed infection of a tuberculous focus.

The irreparable damage which continued pelvic suppuration can inflict upon the several pelvic organs of a woman is too well known to you all to need any word picture; and yet how few appreciate the simple and effectual means that we have for the arrest of these ravages. The normal Fallopian tube is germ-free, hence, if infection occurs in the oviduct, it must be by continuity from the uterus; purulent salpingitis may rapidly follow a gonorrheal endometritis. This is the most common form of pyosalpinx. The accompanying peritonitis is secondary, from leakage through the abdominal end of the tube; this further seals the fimbriated opening and a pus tumor develops.

The staphylococcus and streptococcus are the next most frequent producers of pus-tubes by the extension of a septic endometritis and are the chief causes of peritonitic and cellular infection. The lymphatics are their channel of election through which to reach the peritoneum. Tubal tumefaction is less common in this form of infection than when the gonococcus has been the invader. Though the tuberculous germ is credited with producing 10 per cent. of tubal inflammations, the pathological changes are seldom of an acute form, rather producing a hyperplasia of the mucous and submucous structures than the formation of pus accumulations.

It would seem, therefore, from the foregoing statements that all of these germs, with the exception of the tubercle bacillus and the colon bacillus, are capable of establishing an acute primary infection, passing rapidly along the uterus and tubes or through the pelvic lymphatics to the peritoneum. When primary the degree of peritonitis will correspond to the number of lymphatics which are involved. While the puerperal state exaggerates the virulency of streptococcic infection, the pregnant state after the third month seems to afford an immunity from the gonococcus. Also it must be noted that peritonitis of a gonorrheal origin is apt to occur at the menstrual period, and acute exacerbations in the course of a chronic gonococcic process are not uncommon at this time. In streptococcic infection the lymphatic invasion is so rapid that the formation of local foci will be found of rare occurrence; a general toxemia of more or less severity speedily supervenes. A general recognition of this fact will emphasize the necessity for prompt drainage.

The symptomatology and physical signs, together with an accurate history, will help to differentiate the local conditions. Clinically in pelvic suppuration the lines are not so sharply drawn as the books would lead us to suppose, owing to the rapidity with which neighboring structures are involved, making visceral isolation difficult. A history of abortion, labor, arrested menstruation, intra-uterine instrumentation or gonorrheal exposure, followed by pelvic or abdominal pain, fever, chilliness, anorexia, constipation or diarrhea and accompanied by a vaginal discharge of a purulent, sanguineous or a sanguino-purulent character, should call for prompt and careful pelvic exploration to determine the seat of attack. This examination should be abdominal, vagino-abdominal and recto-abdominal in the order named. Such a system adopted as routine will seldom fail to locate the septic focus. When, however, the infiltration is so extensive as to make visceral isolation impossible, vaginal incision and intra-pelvic exploration with the finger, when done aseptically and as a preliminary to subsequent operation, will obviate all possible error in diagnosis and guide the surgeon in his plan of procedure.

The pus focus may be found in the broad ligament, in the tube, in the ovary, in the pelvic peritoneum, safely walled off by exudate, or free in the peritoneal sac. The physical signs in the individual case will depend on the location and the character of the accumulation, *i.e.*, whether it be lymph, pus, or serum. The degree of general toxemia will also be largely governed by the nature of the infecting agent, thus widening the range of symptoms.

In acute salpingitis which has reached the form of a pyosalpinx, the uterus may be found more or less fixed on the affected side and displaced toward the opposite pelvic wall. A hard or fluctuating mass will be felt on vagino-abdominal palpation. This tumor may be in the cul-de-sac or high up near the pelvic brim. Whether the pus-tube can be isolated or not will depend upon the degree and the extent of the pelvic peritonitis in the particular case. The distended tube is usually closely matted to the posterior and lateral wall of the uterus. The disease is often bilateral; this is particularly true of infections of a gonococcic origin; again, it is not unusual to find a tubal abscess on one side and a purulent salpingitis on the other.

The differentiation between an acute ovarian abscess and a pus-tube is difficult. It is the writer's belief that such a diagnosis cannot be positively made until the cul-de-sac is opened; even then the two conditions so frequently co-exist and are so commonly involved in the same mass of exudate that isolation may be impossible. An

ovarian abscess is usually firmer and more rounded than a pus-tube, and commonly develops on one side only.

Tuberculous pyosalpinx cannot be diagnosticated macroscopically unless the tubercles can be seen or felt on the surface of the distended tube.

Streptococcic infection of the pelvic peritoneum is characterized by its rapidity, its marked general toxemia, and the almost constant absence of local findings. The pelvis is rapidly filled by fluid made up of straw-colored serum, pus-cells, blood-cells and lymph-flakes. Masses of lymph are uncommon. These points must be constantly borne in mind, as the tactile appreciation of free fluid in the cul-de-sac unless it be present in considerable quantity, presents difficulties which tax even the diagnostic acumen of the most skilled pelvic surgeon.

Masses of lymph surrounding and fixing the uterus, stiffening the broad ligaments, producing distention or stricture of the rectum and inhibiting the muscular action of the bladder, suggest staphylococcic or colon bacillic infection. Such lymph effusions resolve spontaneously, unless disorganized or infected by interference, and make up that class of non-operative cases referred to by Clarke in his excellent paper on the treatment of pelvic peritonitis.

Phlegmon occurring within the folds of the broad ligament invariably follows labor or abortion. The condition begins as a lymphangitis and cellulitis and ends in either resolution or suppuration. If it terminate in resolution, a thickened broad ligament is its only monument. On the other hand, if a phelgmon occur it may separate the folds of the broad ligament and bulge posteriorly lifting up and displacing the uterus laterally or forward toward the opposite pelvic wall. The diagnosis is comparatively easy when the condition is seen early or fluctuation may be elicited, while later the tumor may so fill the pelvis or become bilateral and so displace the pelvic contents that the seat of original infection may be lost sight of.

Fever, tympanites, pain, tenderness, an accellerated pulse-rate, and more or less toxemia are common to all of these infections. Of course the severity of these symptoms will differ in the individual case.

Treatment.—In order to establish a rational and scientific treatment in pelvic inflammation, two general classes must be appreciated, i.e., cellulitic and peritonitic lymph-effusions, and, second, pus accumulations in the tubes, broad ligaments, ovaries and pelvic peritoneum. In the first class, the general symptoms may be so mild that absolute rest in bed, light catharsis, rectal irrigation and the application of ice or poultice over the seat of pain will usually cause spontaneous resolution and gradual absorption of the exudate. It has been my fortune to open the abdomen for other conditions six months or a year after such an attack of pelvic inflammation, and to find little or no evidence of previous inflammatory trouble. I have been particularly impressed with the absence of visceral and parietal adhesions, showing that Nature undisturbed is often capable of fully re-establishing visceral mobility.

In the second class, which includes streptococcic infection without local foci, and mixed infections with pus accumulations, vaginal incision and drainage will afford the greatest protection against general intoxication. The French were wont to do this by panhysterectomy and drainage through the vaginal vault, but the writer has always claimed that the shock of a major operation in the presence of acute sepsis, no matter how rapidly or skilfully it may be done, more than counterbalances the advantage gained from the drainage secured.

Only a few years ago all pus-tubes were subjected to ablation by celiotomy. It was almost universally advocated that in the presence of a pus-tube on one side a double salpingectomy should be made. This practice had a reasonable basis, for, as we have already shown, tubal infection is commonly but an extension of an inflammation from within the uterus. Reasoning in this line the panhysterectomists said, if we are to take out both tubes, why leave an infected uterus to keep our patients from a complete cure? The advantage of vaginal drainage was also gained by this radicalism. Fortunately for woman the pendulum has swung from such mutilation toward scientific conservatism.

In acute pus collections, whether they be in the tube, ovary, or in the pelvic peritoneum, vaginal section and drainage will meet the indication and often conserve a set of pelvic organs which are capable of performing their functions with little or no pain. A further advantage is that the operation is rapid and produces little or no shock. I also claim that any intelligent practitioner who has perfected an aseptic technic may open the posterior cul-de-sac, separate fresh adhesions and drain pus cavities without being dependent upon the nearness of the gynecological surgeon.

By this procedure patients who are acutely septic are saved weeks of suffering and the prognosis is materially bettered. Later it may be necessary to have a more radical operation performed that a complete symptomatic cure may be attained, but in the vast majority of cases vaginal section and drainage when done early are truly life-saving and conservative in their results. Posterior section and drainage or some modification of that operation may be applied to almost every form of acute pelvic infection, including pyosalpinx, tubo-ovarian abscess, purulent peritonitis, parametritis, abscess and pus collections within the broad ligament.

A description of the method as applied to acute pus-tubes will serve as an illustration. The vulva and vagina are carefully sterilized and the uterus curetted; the posterior lip of the cervix is then siezed with a volsellum and pulled downward and forward, while a weighted speculum retracts the perineum and exposes the posterior utero-vaginal

junction; the mucous membrane of the vagina is incised transversely at this point (the incision is similar to the posterior incision for vaginal hysterectomy); the scissors are then replaced by the finger and the tissues peeled up from the back of the uterus; keeping in the median line until the peritoneum is exposed, the finger is pushed through the peritoneum into the pelvis and the opening enlarged by introducing the two index fingers into the cul-de-sac and spreading them apart. The perineal retractor is then withdrawn and the two fingers within the pelvis free all adhesions within reach, separating the tube and ovary of each side until they can be delivered into the vaginal wound for inspection. All who have done this work will acknowledge the facility with which adhesions are freed from below. With but little difficulty the adnexa can be brought successively into view, and, by the use of the Pryor position and trowel retractors, the whole pelvis may be inspected through the vaginal wound. If a pus-tube be present the following plan has been eminently satisfactory in my hands: After freeing the tumor from all adhesions, a sponge with a tape attached is passed into the pelvis; the distended tube is brought into the vagina and incised along its dorsum, beginning at the fimbriated end and running in for an inch or more; this empties the tumor of pus, which is washed away with saline irrigation. The tube is sponged dry and a fine probe carefully passed along its course into the uterus, thus determining its patency. The muscosa is sutured to the peritoneal coat with fine catgut. It may be necessary to repeat the procedure on the other side. I do the same operation in the presence of gonorrheal salpingitis, even when no tumefaction is present. Every adhesion must be freed before the final toilet is begun. The pelvis is sponged dry and a strip of iodoform gauze is tightly packed in each tube. The tubes are then replaced and the pelvis is loosely filled with strips of gauze or a Mikulicz bag with the adnexa lying above the drains. In this way the pelvis and uterus are isolated from the general peritoneal cavity and the lymphatics, the mouths of which were opened by separating the adhesions, pour out their fluids upon this mass of gauze. Thorough drainage is thus secured. I have found it to be an advantage to have the ends of the drainage gauze come out of the vagina and lie in a mass of dry sterile gauze. This should be frequently changed. The drainage gauze is withdrawn after five or six days. On the third day begin loosening it by pulling out a few inches. When once removed I have never found it necessary to replace it. *No irrigation of the pelvic cavity during operation or following the removal of the gauze is admissible.* The walled-off cavity will drain itself by gravity; this may be favored by urging the patient, when her condition permits, to assume the semi-recumbent posture.

In tubo-ovarian abscess incision and drainage are often palliative rather than curative; they arrest the sepsis, leave a functionating ovary which unfortunately may have too much cicatricial tissue in it, and produce such dysmenorrhea as to necessitate subsequent ablation. In the few cases that I have seen early, five in all, three have become pregnant since the operation, while the other two have had the adnexa removed for menstrual and intermenstrual pain. I have been impressed by several points which would justify the incision and drainage of every tubo-ovarian or ovarian abscess, *i.e.*, the subsequent operation has been much easier than in similar conditions which have not been previously emptied through the vagina; the patient was in better condition, the adhesions were more easily separated and the convalescence was smoother.

It is in pelvic peritonitis that vaginal incision and drainage have their widest field of application, for by these measures we are able to drain the lymphatics as they pour out their infecting organisms and isolate the pelvis from the general peritoneal sac. Even in purulent peritonitis early section in conjunction with the semi-recumbent posture may save our patient. When the toxemic symptoms have not improved twenty-four hours after curettage and irrigation my rule has been to open the cul-de-sac, free all adhesions, and drain with the patient's shoulders raised from eighteen to twenty inches. I have yet to see the case in which hysterectomy is justifiable when this simple procedure has been properly done.

In conclusion I wish to make the following statements and claims:

1. Early diagnosis in pelvic suppuration is imperative.
2. When the diagnosis is made, operate.
3. The vaginal operation is the one of choice.
4. When it is done early with strict asepsis it is curative and may preserve the function of the woman's organs.
5. It improves the patient's condition, makes subsequent operation easy, prevents rather than causes adhesions.
6. It may be used for diagnosis in obscure cases without shock or injury to the patient (if aseptically performed).

Finally, this operation may be applied to every acute suppurative condition within the pelvis.

VENTROFIXATION: A SUGGESTION.

BY VICTOR C. PEDERSEN, A.M., M.D.,
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ONE of the objections against ventrofixation as proposed by Professor Kelly is that the incision passes directly through the linea alba. Although the opening into the abdomen may be very small, it is, nevertheless, direct in its passage through this tendinous structure, which, like similar tissue everywhere in the body, is known to heal more or less unfavorably for strain, even when the union is primary. On the principle of Professor McBurney's intramuscular method of opening the abdomen for appendectomy, two ventrofixations were recently done by me in the

Corning Hospital on much the same plan. The principle is certainly not a new one and no claim to originality therein is made; but it seems desirable to describe the method and its results up to the present time merely as a suggestion. A similar procedure has probably not been described in medical literature, although the best journals on surgery and gynecology in French, German and English, and most of the really good works on these subjects have been searched for it.

The details are these: (1) Exposure of the sheath of the rectus through a median cutaneous incision two or three inches long; (2) strong retraction of the skin to one or the other side; (3) opening the sheath of the rectus about three-quarters of an inch from the median line; (4) liberal loosening of the rectus from its sheath and retraction of it as far outward as possible; (5) opening of the peritoneal cavity; (6) loosening of the peritoneum behind the linea alba; (7) search for large vessels at this point; (8) passage of the sutures as follows: The median edge of the peritoneal wound is seized with forceps and the needle is introduced half an inch away from the middle line; it is next carried through the uterus, emerging beyond the median line on the opposite side; it is then passed forward through the peritoneum, previously loosened as described, and then through the linea alba sufficiently deep to secure a firm hold; the two ends are then seized in an artery clamp; the other suture is passed in the same way and both are tied, so that the knot is extraperitoneal; (9) suture of the peritoneum; (10) restoration of the rectus to its sheath; (11) ordinary layer sutures close the rest of the wound.

The result of this operation is that the uterus is suspended in the median line, as in Kelly's original operation, while the scar is lateral to the point of fixation and is itself protected by the healthy rectus muscle, being "staggered."

In closing the sheath of the rectus mattress sutures were used, so arranged that they did not pull on a single bundle, but on many bundles of fibers. This was accomplished by passing the needle near the edge on the right side of the wound and emerging quite far from the edge on the left side. Then on the left side it again pierced the fascia near the edge and emerged on the right side far from the edge. When these stitches were tied this arrangement gave perfectly uniform apposition and the advantage of there not being any likelihood of their cutting through at the least strain.

Another detail which seemed very advantageous was the insertion of a retention catheter into the bladder before the uterus was suspended. With the aid of the catheter it is possible to inject into the bladder from six to ten ounces of sterile salt solution. In this manner the best place for fixing the uterus is clearly indicated, because, if the vagina is long and lax enough, the filling of the bladder can be increased and the uterus still suspended a little above it. By this process of measuring it is hoped that the bad after-effects of the operation, that is, pressure by the uterus upon the bladder for the first few months, as Kelly himself admits, will be avoided. It is perhaps suggestive that neither of my cases has suffered at all in this way up to the present time. The first woman was operated on for pronounced retroversion with adhesions, and the second for extreme pathological anteversion. Both suffered from obstipation and from frequent urination. The second patient had to empty her bladder night and day about every three hours. Since the operation she has been passing her urine about five times in twenty-four hours, which is a new experience for her after many years of great discomfort. It was felt that doing a ventrofixation for anteversion might be regarded as hardly warranted, but the symptoms were such as to make me believe that only a lifting of the uterus away from both bladder and rectum would avail. As the woman desired to have children, if possible, no other operation could be contemplated except ventrofixation. The results up to the present time have proved this judgment to have been entirely correct.

A CASE OF LEUCEMIA, PRECEDED BY MUCO-SANGUINOLENT COLITIS AND PHYSIOLOGICAL LEUCOCYTOSIS.[1]

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THE whole question of the etiological rôle of toxemiæ of intestinal origin is involved and obscure, although its importance cannot, in my opinion, be doubted. In dilating so largely upon this subject, in the report of a single case, it is largely for the purpose of indicating what appears to me to be its broad relations to clinical medicine in general, and especially to chronic intestinal diseases. So far as the etiology of leucemia in general is concerned, and of this case in particular, the sequence of carefully observed facts is presented as a contribution to a very difficult, and still unsolved problem, which will require for its ultimate solution, if indeed it is ever to be solved at all, a more extended view-point than is at present accessible. The following is the report of the case:

L. D., age twenty-three years, school teacher. The patient had never been of rugged appearance, indeed, quite the contrary, although capable of enduring a great deal. There was a history of post-scarlatinal dropsy at three years of age, and several attacks of "bloody flux" at ten. History otherwise not noteworthy. The patient was first seen by me in winter of 1897 at which time he was suffering from a moderately severe grade of secondary anemia, apparently the result of overwork and an intense chronic colitis of one or two years' duration, accompanied by frequent dis-

[1] Read before the Kankakee Valley Medical Association, Plymouth, Ind., October, 1901.

charge of mucus and blood. These symptoms had existed for several months. At that time the red cells were 3,500,000, hemoglobin 65 per cent., with a leucocytosis of about 14,000. Stained slides showed the leucocytosis to be strictly physiological in type, the differential count revealing the proper proportion of neutrophiles, and large and small lymphocytes, no mention being made of the number of eosinophiles; but it is certain that no abnormal forms of leucocytes were present, such as the myelocytes which appeared in such large numbers later. I saw the patient, who lived some twenty miles from my office, only a few times when he disappeared from view.

He again reappeared March 30, 1899, with a history of progressive deterioration of health, the symptoms being much the same in character as when first seen. For some months the diarrhea had been persistent, and controlled with difficulty, but was the greater part of the time of a thin, watery character, and at that time rarely contained blood. He had to take opiates constantly in order to control the diarrhea so that he could sleep. The spleen was remarkably enlarged, extending down within about two inches of the pubis, and to within two or three inches of the right anterior superior iliac spine. Its consistence was firm and its extensive outline irregular and notched. The liver was also greatly enlarged. Stomach examination showed entire absence of free hydrochloric acid, with perfect starch digestion, but very faint biuret reaction. There was no lactic acid, and the total acidity was very low—10°. The fasting stomach contained the usual detritus of chronic gastritis, the quantity of mucus in both the fasting stomach and gastric juice being large. Microscopical examination of the dejecta revealed a morbidly intense bacterial growth, with many protozoa, and large quantities of epithelial cells and mucus. The filtered aqueous infusion of alvine discharges was shown by the spectroscope to contain unaltered bile, which with bile stained microscopical flocculi of mucus established the diagnosis of a catarrhal lesion of small as well as large intestine. The acrid alvine discharges, together with the local infection, had developed and maintained a severe proctitis which was a source of great suffering.

The analysis of urine gave the following result: Total quantity in twenty-four hours, 1,600 c.c. (about 1½ qts.); specific gravity, 1,020; total solids, 74.56 grams; urea, 3 per cent. or 48 grams; uric acid, 1.8 grams; no albumin, sugar, indican, phenol, nor diacetic acid.

Notwithstanding the absence of an excess of both indican and phenol the ethereal sulphates, estimated by the method which I published in the *Journal of the American Medical Association*,[1] were greatly increased. The simple or fixed sulphates were 2.3, the ethereal sulphates .9, estimated as SO_3. This was in proportion of 2.8 to 10 instead of 1 to 10 as in health.

[1] Jour. Amer. Med. Assoc., March 31, 1900

The blood examination furnished the key to the case. The blood was found to be of a peculiar, opalescent hue and exceedingly thin. There was scarcely any pretense at coagulation, the drop remaining fluid on the finger until it thickened by evaporation, with the ultimate formation of a loose coagulum.

The hematocrit showed about 40 per cent. red cells, indicating about 4,000,000 per c.mm.; this however was found to be somewhat in excess of the figures obtained by the Thoma-Zeiss apparatus. The discrepancy did not lie in the size of the red cells, which were of about average size, but, as shown by a microscopical examination of the red column, was due to a large admixture of white cells, which does not occur in centrifugated normal blood. It appears to me that there is only one probable explanation of this phenomenon, and that is the greater specific gravity of the leucocytes in leucemic blood and especially of the myelocytes. This is an observation of some scientific interest which I do not remember seeing recorded before. The rouleaux formation varied greatly. It was sometimes normal and at others very feeble. The hemoglobin was reduced to about 50 per cent. of the normal, showing a greatly diminished color-index. The chief interest, of course, centered in the study of the dried and stained slide. It was typical of splenic medullary leucemia. The red cells presented nothing especially noteworthy, excepting pallor, an occasional normoblast, and the polychromatophilic degeneration of Ehrlich. With regard to the white cells, however, the properly stained slide showed a large number of myelocytes—that form of cell which is highly characteristic but not pathognomonic of lieno-medullary leucemia. This cell resembles the neutrophile in having the neutrophile granules, and the lymphocyte in presenting a spherical, ovoid, or some other form of nucleus, without divisions, and very large in proportion to the containing cell. The nucleus stains with variable intensity, and the granules may be eosinophilic instead of neutrophile. The myelocytes vary greatly in size, some of them being very large. The largest one that I found among many measurements in this case was about 20 μ

While, as I stated, the mere presence of myelocytes is not pathognomonic of leucemia, their presence in large numbers is absolutely so. If they form 10 or 15 per cent. of the total number of leucocytes, the diagnosis of leucemia may be positively made from this fact alone. The percentage is generally much larger than this. In this case, for instance, one of many differential counts gave the following result in a count of 515 leucocytes: Polymorphonuclear neutrophiles, 180 or 35 per cent.; simple myelocytes, 162 or 31 per cent.; eosinophile myelocytes, including all those in which there was a distinct tendency toward the acidophile staining of granules, 51 or 10 per cent.; total myelocytes, 213 or 41 per cent.; large lymphocytes, 43 or 8 per cent.; small lymphocytes, 65 or 12 per cent.; ordinary eosinophiles, 2 or .2 per cent. At this particular time

the white-cell count was 277,200 per c.mm. Estimating the number of different kinds of white cells per c.mm. present at this time, we have, in round numbers: Polymorphonuclear neutrophiles, 97,000; simple myelocytes, 85,900; eosinophilic myelocytes, 27,700; total myelocytes, 113,600; large lymphocytes, 20,000; small lymphocytes, 33,000.

The patient's general condition was very bad. He looked pale and anxious, and was emaciated to a considerable degree. He was under my observation, either directly, or as a consultant, for a year and a quarter up to the time of his death. It would not be justifiable to present the detailed history of the case during this time, with a full discussion of the treatment. Arsenic, the various preparations of iron, bone-marrow and thyroid extract were among the remedies exploited in the case. While there were periods of improvement, the general tendency was downward, the latter tendency being often accentuated by indiscretions on the part of the patient, whose endurance, as usual in such cases, was severely tested. The most important measures of treatment were those directed toward the gastro-intestinal disease, which certainly preceded, by a considerable time the hemic changes of leucemia. The gastritis was treated by local measures, lavage, intragastric faradization, etc., with marked improvement of the digestive function. This I consider a proper procedure in any case of chronic nutritional disease, without any regard to the real pathology of the case in its relation to the gastric disease.

The determining question from a therapeutic point of view, in my opinion, is, Have we to deal with a stomach lesion which is, under the circumstances, amenable to such treatment, with a probability of improving the condition of the patient to a noteworthy degree? In such a case as this the only hope of greatly prolonging life is to improve the general nutrition, and the primary digestion is fundamental in this regard. In this case the improvement in digestion was followed at times by so marked an improvement in the general condition, as to lead to the hope of a long stationary period. I feel confident that such a result might have been attained, but for the unfortunate intestinal lesion, which has very much the appearance of being the principal etiological factor in the case, but in any event was so severe as to baffle all attempts at its removal. This was due, doubtless, quite as much to the bad state of general condition as to lead to the hope of a long lesion itself. It was this apparently, more than anything else, with its incessant pain and exhaustion which dragged him down to death.

The nature of this lesion has already been indicated. Its treatment cannot be described in detail. As already stated, opium in varying dosage had to be called into almost constant requisition. It was used, however, to the least extent compatible with the reasonable relief of the severe symptoms, and was constantly supported, and sometimes supplanted by other measures. Locally the colitis was treated by silver salts, including protargol, boric acid, and various other antiseptics. Suppositories of lead, opium, belladonna, etc., were frequently resorted to. Internally eosot and subgallate of bismuth were principally relied upon.

Only a small contingent of the remedial agents and measures utilized in the case can or need be referred to here. As already stated the general tendency was downward, and death from asthenia resulted June 10, 1900, fifteen months after the diagnosis of leucemia had been made.

The autopsy included a careful examination of the abdominal and thoracic viscera only, the bone-marrow not being examined. The spleen was greatly enlarged, weighing three and one-half pounds, and very fragile in consistence. The liver weighed about five pounds, and was distinctly indurated. The colon showed evidences of the intense inflammatory action of which it had been the seat. There were numerous deep abrasions, some of which could be properly classified as superficial ulcerative processes. The small intestine was normal macroscopically. The only noteworthy thing about the heart was the presence of the soft white coagula described by Virchow and which were found to be composed principally of leucocytes.

There are several points in this case which appear worthy of record and discussion. The most important one, I think, is the existence of chronic colitis of long standing, associated perhaps the greater part of the time with a catarrhal condition of the small intestine; this, taken in connection with the physiological leucocytosis definitely recognized before the appearance of myelocytes, raises a very interesting question of etiology. The belief that intestinal disease may bear a causative relationship to leucemia is not new, although perhaps it has rarely happened that the order of events has been so definitely established as in this case. Saunby has recently reported in the *British Medical Journal* a case with ulcers. How soon after my first observation of this case myelocytes appeared in the blood, and especially in sufficient numbers to establish the diagnosis of leucemia, is, unfortunately, a matter of conjecture only, as no scientific study of the blood was made in the interval.

The sequence of chronic colitis and leucemia being established in this case, the relationship of the latter to the former—whether a result or an independent development—is a question of deep interest. Owing to the very unsatisfactory state of our knowledge of the pathology of leucemia, it is difficult, if not impossible, to discuss clearly this question along definite lines. There are, however, certain considerations of a general character which appear to me well worthy of attention.

The state of general and local nutrition, incident to such a case of chronic colitis as the one reported, must obviously be very bad. The colon is of course the seat of a chronic infection which is associated, necessarily, with the formation of relatively large quantities of toxic substances of

various kinds, the precise nature of which we cannot determine. Owing to the lowered antitoxic coefficient of the liver, the absorption of these products into the portal circulation is followed by their entrance into the systemic circulation to a great extent unchanged in form. The liver is, owing to its physiologico-anatomical relationship, the first structure to suffer from the absorption of toxic material from the alimentary canal, and, just in proportion as its functional integrity is impaired, do the structures which it is designed to protect suffer in consequence.

It is not necessary to regard leucemia as a pure infection in order to perceive the possible causative relationship of an intestinal infection. The sharp distinction between lymphatic and myelogenous leucemia can scarcely be maintained in the light of recently reported facts. Cases with a preponderance of large mononuclear cells have been observed with extensive involvement of lymphatic structure, while Widal and Muklen have recently reported a case in which the picture was that of a pure lymphatic leucemia, while the bone-marrow was found at autopsy to be composed of a tissue containing nothing but lymphocytes. Admitting that leucemia is a primary disease of the bone-marrow, the operation of an exciting cause can still be rationally assumed, and sought for. This is precisely the rôle that I would assign in the existing state of our knowledge to such conditions as anteceded the development of the leucemia in the case here reported. From this point of view something more than the toxemia and malnutrition of intestinal origin is necessary for the production of the leucemia. Just what that "something" is cannot be readily defined. It may be spoken of as a special vulnerability—a peculiar tendency to take on degenerative changes of the embryonic type—on the part of the tissue under consideration. If this explanation is unsatisfactory it is no more so than the explanation given of the frequently observed fact of large families being swept away at about a certain age with pulmonary tuberculosis. The practical fact is, dress it in whatever terms one chooses, that there are morbific tendencies in certain families and individuals, which render destructive agents operative in the production of certain results. Yet these tendencies, without the exciting causes, would scarcely, if ever, give rise to any particular disease, and, of course, in the case of specific infections like tuberculosis, could not do so under any circumstances, although it is quite conceivable that such results might follow in diseases like leucemia, in which the principal factor may possible be the degenerative tendency to which reference has been made.

While the clinical picture of leucemia impresses me as it has many others, as having many of the features of a general infection, yet I do not for a moment believe there is available evidence for assuming the existence of a specific infection in the ordinary sense of the term; nor is it necessary to do this in order to assign an important rôle to the general infections of varied and indefinite character which arise from the various mucous surfaces of the body and especially from the gastro-intestinal tract. From this point of view the results of a general infection of the character referred to will depend very largely upon what may be termed the personal equation of the individual, and to go a step further, the resistive power and functional integrity of the organs and structures of the individual. This is, perhaps, equally true of the specific infections, the only difference being that their effects are not so variable—it is usually either a definite clinical picture or it is nothing.

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MEDICAL PROGRESS.

EYE, EAR, NOSE, AND THROAT.

The Epipharyngeal Tonsil.—In an article on the nature and histopathology of this structure, N. H. Pierce (Jour. Amer. Med. Assoc., Jan. 4, 1902) submits the following conclusions: (1) The tissue composing adenoids has a wide distribution throughout the body, especially abundant in the pharynx and in the ileocecal region of the intestinal canal, also in the conjunctiva, tear-ducts, genital mucosa, larynx. (2) The epipharyngeal tonsil is normally present in all individuals. (3) Its function is at present unknown. Whether it is simply an evolutionary vestige or has to do with metabolic processes is uncertain. (4) It probably belongs to the class of glands having an internal secretion. (5) The relation of tuberculosis, syphilis, or scrofulosis to adenoids is not etiological.

Ulcer of the Cornea.—Progressive ulcers anywhere on the eye are dangerous and at no point are they more threatening than on the cornea. A. M. Ramsey (Med. Press & Circ., Dec. 18, 1901) recommends the following treatment for traumatic serpiginous ulcer of the cornea: Rest by keeping the patient in a dark room, protection from further injury, and the relief of pain are the first three indications. The patient should be kept in bed in a dark room with the eyelids closed by a bandage. In order that the bandage may be laid smoothly and not exert an uneven pressure a carefully-fitted pad of cotton which fills up the hollows of the eye should first be applied. A poorly-fitting bandage is worse than useless. Discharge from the lacrymal sac must be arrested and the tear-passages kept cleansed. Atropine is the best drug for the iritis which always complicates this form of ulcer. It soothes the nerves, diminishes congestion, dilates the pupil, paralyzes the ciliary muscle and insures rest for the eye. Its effect upon the pupil is a guide to prognosis; the more quickly the iris responds, the more favorable will be the course of the disease. Leeches over the temple decrease congestion and pain. Free bleeding always does good. When the ulcer is about to perforate, eserine should be substituted for the atropine. This drug has a more limited use. In this condition and almost invariably the atropine should be preferred in a solution of one to two per cent. until the very last stages. Moist heat may be applied to the temples and face to relieve congestion and reduce intra-ocular tension. Further progress of the ulcer demands disinfection of its surface. Nothing is better than the application of hot saturated solution of boric acid continued until all discharge has been washed away; then a powder of equal parts of iodoform and boric acid very finely triturated should be dusted freely on its surface. Other disinfectants are a collyrium of chino-

sol, one part in four thousand, and protargol, five parts in one hundred. The injection of mercurial salts beneath the conjunctiva is to be deprecated. Constitutional treatment is always necessary and is carried out by good food, alcoholic stimulants, quinine in full doses, and morphine according to indications. If the ulcer be still progressive, surgical measures may become necessary. A bold incision of the cornea through the ulcer into sound tissue is recommended on the authority of Saemisch of Bonn; this is, in short, the same treatment as for an abscess elsewhere. The hypopyon is evacuated by this method and then drained by keeping the wound open. Care must be taken to avoid a prolapse of the iris, which almost certainly follows in many cases. Another operation available is to destroy the edge of the ulcer. For this purpose an alkaline solution of fluoroscin is dropped into the eye, which makes the margin of the ulcer a bright green. A fine platinum cautery at dull red heat is then applied to the cornea in healthy tissue just beyond this green line. The burning is continued until all of the infiltrated margin is destroyed. The healing of the ulcer will be promoted by the reduction of intra-ocular tension. The cornea should be incised at its outer aspect and the anterior chamber of the eye slowly emptied. Congestion and hemorrhage within and displacement and partial prolapse of the iris accompanied by great pain often follow this procedure. Hot poultices will usually control these symptoms. If the destruction of the ulcer with the cautery be well done, the healing process is rapid and the scar is comparatively slight, considering the dreadful type of the ulcer.

Haab's Magnet for the Extraction of Foreign Bodies from the Eye.—From a study of nine cases in which this instrument has given favorable results, W. T. H. Spicer and A. F. Maccallan (Brit. Med. Jour., Jan. 18, 1902) reach the following conclusions: (1) When the patient is brought up to the magnet, it is the rule for severe pain to be experienced by him if a magnetizable particle is present in the globe. Haab's magnet is therefore of valuable diagnostic service in determining the presence or absence of such a particle. (2) Localization by the X-rays is extremely important. By their means it is possible sometimes to avoid injury to a clear lens in the extraction of a foreign body and entanglement of the iris can be avoided if its precise situation be known. (3) If there be a recent wound we attempt to remove the foreign body through it, using Haab's magnet alone. If this wound has firmly healed, it is necessary to make an opening for its exit. This may be either corneal, in which case the foreign body is withdrawn by Haab's magnet, or peripheral, in which case the small magnet for the removal of the foreign body from the anterior chamber, after it has been brought forward by Haab's magnet, is usually employed. (4) In all cases it is most essential that entanglement of the particle in the iris and ciliary body should be avoided. By gradually bringing the patient from a distance up to the magnet and by increasing slowly the strength of the current up to the maximum, this is to a certain extent guarded against. The idea is to prevent the particle from rushing forward from its posterior position and burying itself in the iris.

Sympathicectomy in Optic Atrophy.—Many cases of simple glaucoma have been so markedly benefited by the excision of the sympathetic ganglia that this operation has been suggested for the relief of other conditions when vascular changes were necessary: The reduction of tension which follows sympathicectomy in eyes with normal as well as in those with increased tension, lessens the pressure on the intra-ocular portion of the optic nerve. Then the vaso-dilating effect of section of the sympathetic nerve increases the blood-supply of the nerve, both of the intra-ocular portion and the orbital. This healthful artificial arterial hyperemia promotes a regeneration of the nerve elements and a resulting restoration toward the normal state, with a consequent increase of its function, vision. Nitroglycerin has been found to do the same thing, but its effects are more temporary. E. C. Renaud (St. Louis Med. Rev., Feb. 1, 1902) has operated on these cases of simple nerve atrophy, founding his indications upon the above well-known principles. In the first case a unilateral operation was done and the improvement in vision was only slight. In the last two excision was done on both sides and the results were much better. In glaucoma also operations seem to be necessary on both sides in order that the best results may be obtained, probably on account of the intimate relations of the sympathetic systems at the base of the skull. In the third case vision has improved from 10-200 to 20-50 and this seems to have been permanent. He believes that the incision behind the sternomastoid muscle is preferable to the one in front of it on account of the ease with which the internal carotid artery and jugular vein are gotten out of the way. Furthermore the field of operation is larger. He recommends tearing the ganglion out rather than cutting it, for by the latter method parts of the ganglion must be left and may continue to exert their influence.

Rhinopharyngeal Origin of Goiter.—In no case of goiter has Dr. Hamon du Fougeray of Mans (Rev. Hebdom de Laryn., Rhin. et Otol., No. 1, 1902, p. 20) found rhinopharyngitis absent. Treatment of the latter has improved all of his 209 cases and cured many. Exophthalmic goiter has also been helped. His theory is that congestion of the thyroid gland is produced by reflux of blood from the pharyngeal into the thyroid veins. He sums up as follows: (1) Vascular lesions of the oropharynx cause simple goiter of the cavum and of the nose, exophthalmos; of both nose and pharynx, exophthalmic goiter. (2) Mixed lesions, vascular and sympathetic of the oropharynx, cause goiter and heart troubles—of the vault of the nose, exophthalmos and heart troubles; of the whole rhinopharynx, typical Basedow's disease. (3) Sympathetic lesions alone, of oropharynx, of the cavum and nose, of the whole rhinopharynx, cause cardiac troubles without goiter or exophthalmos.

OBSTETRICS AND GYNECOLOGY.

Spinal Anesthesia in Obstetrics.—This procedure has been used in obstetrics for two distinct purposes, says A. W. W. Lea (Jour. of Obst. and Gyn. of the Brit. Empire, Jan., 1902), (1) to mitigate or remove the pain of labor, and (2) as a method of analgesia for performing obstetric operations. The duration of analgesia is insufficient to render labor free from pain unless repeated injections are given. This plan exposes the patient to the risk of toxic symptoms, and also to the dangers of repeated punctures of the subarachnoid space, and hence cannot be generally advisable. It is, however, possible to give injections when the os is almost fully dilated, and so produce analgesia throughout the second stage of labor; but under these conditions small doses of chloroform give very good results. It has been held by some, Lucas, Championnière, Schroeder, Boudin, that chloroform tends to produce hemorrhage not more frequently than in normal cases. If, however, a distinct tendency to hemorrhage is present, spinal anesthesia by cocaine may by its stimulating action on the uterine muscle possess certain advantages. Up to the present time it has been adopted in over two hundred cases without any serious accident. Puech

considers that up to the present time its superiority over chloroform has not been demonstrated in that it does not produce painless labor nor in operative work have its advantages over chloroform been established.

Contraction and Retraction of Uterine Muscle.—In the first number of the Journal of Obstetrics and Gynæcology of the British Empire PETER HORROCKS says that the following points may be stated: (1) Contraction of a muscle is generally, but not always, accompanied by an approximation of its two ends. (2) When a muscle is shortened to its fullest extent, it can relax or contract without becoming longer or shorter. (3) When muscle contracts, it is unable of itself to return to its former condition: some other muscle or force is required to pull it out or extend it. (4) When muscle contracts and then simply relaxes, it is in a condition called retraction. (5) Retraction is a condition of a muscle in which the active contraction has given place to simple relaxation without extension. (6) In a state of retraction there is a slight and constant contraction called tone. (7) Retraction may be partial or complete, according to the amount of preceding contraction. If the muscle has contracted to its fullest extent before relaxing, the retraction is complete; if anything less than its fullest extent, it is only partial. (8) Retraction of the uterus in labor affects only the expulsive fibers of the fundus and upper two-thirds of the body of the uterus. It keeps the sinuses and broken blood-vessels of the placental site closed, and is therefore of the greatest importance. (9) After the third stage of labor the uterus is sometimes in an active state of contraction, when it is more or less spherical and feels hard and well defined in outline, and sometimes in a state of relaxation, when it is softer and less spherical, and not so defined in outline; but such a condition is quite normal, and in no way indicative of danger. (10) Labor pains are in all probability reflex acts. (11) The less they are interfered with the better. (12) Complete retraction of the uterus is the safest condition for the prevention of postpartum hemorrhage. (13) Complete retraction is obtained by complete contraction followed by relaxation. (14) The law of polarity, as applied to the uterus, is that when the expulsive fibers contract the sphincter fibers relax, and permit themselves to be stretched or extended. (15) The cervical canal can be opened up apart from pressure within, and this is accomplished probably by relaxation of this circular fiber and contraction of the longitudinal fibers of the cervix and lower zone of the body of the uterus. (16) Painless uterine contractions taking place during pregnancy are not followed by retraction, because the fibers are stretched out again by the hydrostatic pressure of the liquor amnii.

Polypi of the Meatus Urinæ.—These are usually situated on the floor of the urethra about two or three millimeters from the orifice of the meatus. They are derived from the epithelioma, from the blood-vessels, from the glands or are from papules of the urethral mucous membrane. Again all portions of the mucous membrane may take part in their formation. They may be single or numerous. They occur at all ages, but most frequently between twenty and thirty. The commonest causes of them are blennorrhagia, leucorrhea, irritation from menses, and coitus. The symptoms are dribbling of urine, sensation of a foreign body in the urethral canal, frequency of micturition, burning and pain during micturition and coitus, bloody discharge, pains in the lower portion of the abdomen and in the groins. The diagnosis can usually be readily made, but when one suspects malignant growth a small portion can be removed and submitted to microscopical examination. The prognosis is good, but there may be complications, such as cystitis, urethritis, uretrocele and prolapse of the urethral mucous membrane. Rarely they may become epitheliomata. Various treatments have been employed in their removal, all of which must be operative to procure an ultimate cure. Some tie off the pedicle, others snip them off with knife or scissors and cauterize the base. The most effective method, however, is to proceed after the same method as is employed in the Whitehead operation for the cure of hemorrhoids. The mucous membrane is separated just as is the pile-bearing area and that portion containing the polypi is drawn down and cut away. The cut portion of the mucous membrane is then brought down and sutured to the orifice of the urethra where it was previously incised. Interrupted sutures are to be used. Four or five are usually sufficient to get a good approximation, according to LEROY (Gazette de Gynecologie, Jan. 1, 1902).

Operations for Retrodisplacements and Prolapse.—The final results of any method of treating disease is always instructive. On account of the rapid progress that surgery has made in the last twenty-five years, statistics concerning it are especially interesting. H. ANDERSCH (Arch. f. Gyn., B. 65, H. 2) reviews the various methods of treating retroflexion and prolapse of the uterus by operation. With special reference to the results obtained, his conclusions are the following: (1) All non-adherent retroflexions with or without prolapse or descent should be treated with pessaries whenever possible. (2) Non-adherent retroflexions, which are complicated with prolapse or descensus of even a very small degree, and all cases of prolapse or descensus without retroflexion of the uterus should be treated by vaginal fixation, if pessaries cannot be worn, and in accordance with the age of the patient. (3) The rare forms of isolated retroflexion of the uterus, with mobility, which cannot be treated with pessaries, must be subjected to either a ventral fixation or an Alexander-Adam operation. (4) All adherent retroflexions of the uterus which require operation at all should be treated by ventral fixation.

Vesico-Vaginal Fistulæ.—Any new rational method of treating these obstinate and troublesome lesions should be hailed with delight. M. A. CASAMYOR (La Gynec., Dec. 15, 1901) presents the following technic for small fistulæ, which certainly pleads a great deal in its favor: The patient is placed in Sims' position and four artery clamps are applied about the margin of the fistulæ after the latter have been cleaned of granulations and fragments. The four clamps are then seized as retractors and the anterior wall of the vagina is drawn toward the vulva into a funnel shape. While so held the wall of the bladder is stripped off the vaginal tissue and turned inward toward the cavity of the bladder. This dissection is carried out all around the fistulous opening and upward for one and one-half to two centimeters. When this step has been accomplished a purse-string suture is passed through the vaginal tissue, which is on the vaginal side of the points where the two layers are in normal anatomical relation. While traction outward is made the purse-string suture is tied and reënforced by one or two interrupted sutures across the opening in the stump which then occurs. A retention catheter is then introduced and retained for four or five days. His cases have done exceedingly well under this simple maneuver.

Triplets.—Multiple births among mankind are after all not by any means uncommon, and any contribution which seeks to explain their cause is of scientific interest. Such is presented by R. SAINTER (Z'schr. f. Gbtshülfe. u. Gyn., B. 46, H. 3). He gives the following data: Out of 70,477 births, 30 cases of triplets alone have been noticed. This is too large a number

but is due to the fact that at the institution in which the statistics were gathered a very large number of the women are primiparæ. This would make the average one set of triplets in every 2,349 births, which is certainly not the truth. Another reason perhaps for the large number is that in multiple births a physician is often on hand and the case is suitably recorded. The revised and modern statistics from all possible sources make their occurrence practically one in eight thousand births. Quadruple births seem to occur once in 371,126 cases and twins once in 89. The age of the mother is a factor in these cases. In twins the greatest number give birth to them between the twenty-fifth and thirty-fourth years, while in triplets the range is from the thirtieth to the thirty-ninth year. The number of previous pregnancies in the same mother always appears to have an influence. There is no doubt that multiparæ show the greatest tendencies toward triplets, and the greater number of children a woman has had the greater is her chance of having either twins or triplets. The revised and modern statistics show further that as a rule triplets occur among the youngest children of very large families on the average oftener than do twins. The character of the previous pregnancies is also a factor in the case. The individual disposition of some women to twin pregnancies is already accepted and indeed to multiple births also. Meribeau has found cases, seventeen in number, in which three, four, five or even more children were born at the same time. Sainter himself has seen three mothers of triplets who had previously had twins once, one mother who had twins once and triplets once previously, and another who had had twins twice and triplets once previously. There are other conditions connected with the pregnancies which are along the line of abnormalities. Many women who have triplets give a history of many miscarriages and abortions. The author has seen eight cases with one abortion, two with one miscarriage at seven months, others with two, four and three abortions respectively, and the last added two miscarriages in addition. Heredity is another matter to be remembered. It holds as well for triplets as for twins. He has seen one case in which the mother herself was a twin; in another brothers and sisters were twins, and in the third the mother had had twelve single and two twin children. The duration and course of the pregnancies are also important. The rule seems to be that the majority of threefold conceptions are not carried to term, but are ended in the second half of the eighth month. A great many of these patients are lost before the pregnancy is half over. The nature of the delivery itself is important to remember. The average length is twelve hours, as in single or double births. The interval between the appearance of the children may be very short or very long. The average is about half an hour, but such intervals as four, six, nine and a quarter, and twelve and one-half hours have been noticed. There is at the present time, however, no record in which the delay between the births of the children has been a matter of days or even weeks, as is sometimes seen with twins, making such pass into the category of superfetation. Childbed is as a rule normal and favorable. The prognosis for threefold conception is as good as for single conception with the sole exception that eclampsia is the chief danger. The children are necessarily much smaller than in twins or in single births. The records show that in 768 cases all were boys 409 times, and all were girls 359 times. Where the sex was mixed in a total of 921 cases two boys and one girl occurred 504 times and two girls and one boy 420 times. The formation of the placenta is the latest point of interest. It seems as if the rule were that the after-birth is divided into two sections most frequently. Next it occurs as one large mass and least frequently there are three separate after-births. Triplets produced from one ovum, as is shown by the occurrence of one chorion, have been recorded only twice. The children therefore had one placenta and were all of one sex. Triplets produced by two ova have been recorded fourteen times. Such would have usually two, never three, placentæ. Triplets produced by three ova, in which each had its own chorion, have been found but nine times. In this case, of course, the children had each its own placenta, but six of the cases had two placentæ. The essential cause of such threefold conceptions is not known and probably never will be.

PATHOLOGY AND BACTERIOLOGY.

The Blood in Syphilis, Tabes and General Paralysis.—In primary syphilis examination of the blood shows a moderate anemia, a positive leucocytosis, and a relative increase in lymphocytes. In the secondary period, according to SARRAZIN and L. MATHIS (La Presse Méd., Jan. 22, 1900) the anemia persists; polynuclear neutrophiles are now increased in number; the percentage of eosinophiles is low. Mercurial treatment causes an elevation in the number of red and of white corpuscles. In tertiary syphilis the blood approaches normal. In tabetics a slight decrease in corpuscular elements was observed, with some degree of relative hyperleucocytosis. In general paralysis, the stage of euphoria is characterized by eosinophilia and a high red blood count. In none of the cases just referred to was there any morphological alteration other than polychromatophilia, and even this was rare.

Compensatory Hypertrophy of the Kidney.—In order to ascertain the pathological changes present in compensatory hypertrophy of the kidney, GINO GALEOTTI and GIUS. VILLA-SANTA (Beiträge zur path. Anat. und allg. Path., B. 31, H. 1) have observed the results of unilateral nephrectomy upon dogs and rabbits. They show that the changes in the hypertrophied kidney vary accordingly as the animal is young and in the development stage or is full grown. In the first instance the number of the glomeruli is increased; in the second there is no increase in number, but each is markedly increased in size. The result is the same in both cases—an increased functional activity. The work is of interest in showing how cells under different conditions of life react to a stimulus which calls for an increase of living substance.

Iodophilia.—Iodophilia, so-called, is the reaction which certain of the white cells of the blood show when a dried blood film is brought in contact with a drop of the following solution: Iodine, 1 gm.; potassium iodide, 3 gm.; water, 100 c.c.; gum Arabic, 50 gm. Normally under these conditions the leucocytes stain a bright yellow, the nucleus being somewhat more refractile than the protoplasm, so that the different varieties of leucocytes can be easily differentiated. In certain pathological conditions the uniform coloration is broken by the appearance in the protoplasm of the polymorphonuclear neutrophiles of reddish-brown granules, or a diffuse brownish coloration, and by the presence of small and large masses, outside the corpuscles, similarly colored. There is thus present an extra- and an intracellular reaction. E. A. LOCKE and R. C. CABOT (Jour. Med. Research, Jan., 1902), as the result of extended observations in regard to the occurrence of this reaction, believe that the brown masses outside the corpuscles are present in small numbers in all blood both normal and abnormal, but frequently in such minute amounts as to be found only after long searching. Only an increase of these masses is to be

considered pathological. They are uniformly and markedly increased in diabetes mellitus, in chronic and very severe acute suppurative diseases and rarely in a few other conditions, but in general their increase is of little importance from a diagnostic standpoint. The intra-cellular granules are always to be considered as pathological. Their presence does not signify a special disease or condition but a general toxemia. Though more constantly positive in the presence of pus than with other conditions, one cannot make a diagnosis of sepsis or of a purulent accumulation from their presence alone. Iodophilia is not identical with, neither does it coincide in its indications with, any of the ordinary physical signs, as leucocytosis, fever, etc. The authors have never observed this reaction in any but severe cases and they believe it to be more reliable in this respect than either leucocytosis or fever. A positive reaction occurs with considerable regularity in the following conditions: Infection with pyogenic organisms, toxemia of bacterial origin, non-bacterial toxemia (uremia), disturbances of respiration and grave anemia, both primary and secondary. Locke and Cabot have never found the reaction in pleurisy, rheumatism, extra-uterine pregnancy, alcoholism, abscesses with free drainage, lead poisoning, early malignant disease, nervous conditions and tuberculosis when uncomplicated by secondary infection.

Myelotoxic Serum.—To the list of toxic serums, in which are included the cardiotoxic serum of Centanni, the leucotoxic of Metchnikoff and Besredka, etc., G. SULLI (La Riforma Medica, Jan. 16 and 17, 1902) has added a myelotoxic serum. The method of its production was as follows: The medullary substance was aseptically extracted from the femur of a rabbit; this was deposited in a pocket which had been made in the subcutaneous tissue of a dog, in the lumbar region a few centimeters external to the vertebral column; the wound was sutured and a dressing applied, due asepsis being observed. After six days, the dog was subjected to the same operation upon the opposite side of the vertebral column, also in the lumbar region. Six days after the second operation the blood was extracted from the carotid artery of the dog, and the serum injected into the subcutaneous tissue of a rabbit, 5 c.c. to each kilogram of the latter's weight being used. The injections were repeated daily, in the same dose, for eight days. The only noticeable effect of this treatment was progressive emaciation. Two days after the last injection, the rabbit was killed; and upon microscopical examination the medullary cellular elements showed marked degenerative reaction to the serum. Carrying the experiment further, the author produced an antimyelotoxic serum by injecting into a rabbit myelotoxic serum for eight consecutive days, 8 c.c. to the kilogram being used. On the ninth day the blood, now presumably antimyelotoxic, was abstracted from the abdominal aorta of the rabbit. Another rabbit received an injection of 5 c.c. of myelotoxic serum, followed by an injection of double the quantity of antimyelotoxic, which had been heated to 55° C. in order to destroy the alexins. Ten days after the first injection, the rabbit was killed, and upon microscopical examination the medullary cells were found free from degenerative change.

Cytoprecipitins.—This subject is exhaustively treated in a series of articles by E. CENTANNI (La Riforma Medica, Dec. 21 and 23, 1901, Jan. 8 and 10, 1902). Solution of the following questions was sought through animal experimentation: (1) Do cytoprecipitins exist in normal individuals? (2) Are they formed through vaccination with cellular elements? (3) Do they occur in the spontaneous absorption of pathological tissues? (4) Have they specific characteristics through which a differential diagnosis of the agents producing them could be made? The first question was answered in the negative through absence of the phenomenon of precipitation after contact of the healthy tissue of an animal with serum extracted from its own organism; hence it is concluded that physiological life goes on without the presence of autocytoprecipitins in the blood. A negative result followed contact of serum from one animal with the healthy tissue of another of the same species (isocytoprecipitins). The same experiment with animals of different species was negative (heterocytoprecipitins). Exception must be made to the above statements in a few instances, but the occasional precipitate observed could be distinguished from a pathological precipitate by the pulverulent rather than flocculent character of the former, its scant quantity, and by the fact that the supernatant fluid did not clarify. The solution of the second question was sought through vaccination with toxic serums; leuco-, nephro-, cardio- and hemotoxic serums being used. In the case of the leucotoxic serum, five vaccinations were practised and serum was withdrawn after each; precipitation occurred in varying degrees, being very abundant after the fifth vaccination. The reagent employed was the medullary plasma from the femur of a rabbit. Experiments with other toxic serums also yielded more or less marked reaction. The conclusion is drawn that a cytoprecipitin resulting from vaccination with cellular elements can be demonstrated, though not invariably. The question of cytoprecipitins in pathological processes was next taken up; the tissues of subjects who had succumbed to phthisis, hepatitis, etc., were used, as well as experimental laboratory material. Diseased human tissue yielded a constant and abundant precipitate upon addition of serum; the results were less marked with laboratory material. A positive answer to the fourth question cannot yet, in the author's opinion, be given, though some indications point to an affirmative solution.

Intestinal and Amyloid Disease in Tuberculosis.—A careful analysis of over 6,000 autopsies conducted under the supervision of F. W. ZAHN (Münch. med. Woch., Jan. 14, 1902) showed that in 32½ per cent. tuberculosis was present, and of these 92 per cent. belonged to the active and 8 per cent. to the latent type. Concerning the distribution of the process in the different organs the following figures were obtained: The lungs were involved in 80.7 per cent., the bones and joints in 3.2 per cent., the urogenital organs in 2.2 per cent., the suprarenal in 1.1 per cent., the brain in 0.3 per cent., and the intestines primarily in 2.3 per cent. Intestinal lesions were found much more frequently as a consequence of a focus in the lungs, to wit, in 63.2 per cent. of all active pulmonary cases. This is no doubt owing to gastric changes, such as acute parenchymatous and chronic interstitial processes, glandular atrophy and amyloid degeneration which so frequently are found with pulmonary tuberculosis and which permit the bacilli to reach the gut in a still active condition. Marked amyloid changes were found in only 1.6 per cent. of all autopsies.

Agglutination Test in Tuberculosis.—The agglutination test of Arloing and Courmont was tried in 256 cases by E. ROMBERG (Münch. med. Woch., Jan., 1902) in order to determine if a positive reaction in apparently healthy persons shows an active latent tuberculosis and if a negative reaction can also be caused by a latent process turning inactive. The result the author arrives at is that considerably more clinical and anatomical data must be gathered before the question can be decided. The reaction was always negative in those cases in which tuberculosis was most apt to be absent, namely, in the newly-born. When tuberculosis was clinically

present, agglutination occurred in 80 per cent., the remaining 20 per cent. consisting of severe and progressive cases of phthisis or of inactive forms. In 102 patients above fourteen years of age without any evident signs, the reaction was positive in 62.7 per cent. Whatever the ultimate conclusion may be, it follows that the serum reaction does not aid in the early diagnosis of manifest tuberculosis.

SURGERY.

Management of the Anesthetic in Operations on the Respiratory Tract.—If a cone or inhaler be used in operations about the nose or mouth the etherizing and the operation cannot very well be carried on together. H. P. MOSHER (Boston Med. & Surg. Jour., Jan. 23, 1902) describes an apparatus which has been used successfully by Dr. T. Fillebrown and Dr. M. F. Rogers in cleft palate operations for the past three years. It is based upon the familiar principle of forcing ether vapor through a tube. A stream of ether vapor plays constantly over the patient's mouth. A water-bath keeps the ether from freezing in the bottle in which it is vaporized and the ether is forced through the tube and into the patient's mouth by a bellows. A valve in the stopper of the ether bottle gives the anesthetist a simple method of administering any proportion of ether and air desired. The water-bath is kept warm by a shielded alcohol lamp. The apparatus is useful in adenoid work. In such work chloroform is dangerous and nitrous oxide gas alone does not give a sufficiently long working period for the nice cleaning of the mouths of the Eustachian tubes. If gas is given for an extended period the resulting blueness is very disquieting, for in these operations there is always danger of getting blood in the trachea, and one of the signs of this dangerous complication is marked and persistent blueness. The upright position affords the best illumination of the parts to be operated on in adenoid and similar work; in this position, also, bleeding is less.

Surgery of the Skull and Contents.—As in the operative treatment of abdominal and thoracic affections aseptic in contradistinction from antiseptic methods have led to a great reduction of mortality, so, too, in dealing with the brain, its membranes and bony support, a decided advance has been made in virtue of the same improved technic. J. S. MCARDLE (Med. Press & Circ., Dec. 25, 1901) says that even in modern practice contemptuous disregard is shown for the method adopted in the treatment of compound fractures of the skull. Death certainly results in most of the cases through septic meningitis. If in fracture of the long bones it be necessary to deal vigorously with the parts exposed to infection, it stands to reason that in managing fractures which open up the diploe and expose the dura the most vigorous precautions should always be taken, first, in cleansing the wound and, second, in securing free drainage. The more radical and thorough the surgical procedure adopted the better will be the result. In injuries of the skull in which infection is absent but in which there is great intracranial tension, the latter may of itself do great damage to the brain if continued too long. There ought to be no hesitation as to the method of treatment, which ought to be the same here as elsewhere in the body. In cases of fever many patients may pass into a state of coma from intracranial pressure alone after the general tissues of the body have practically overcome the infecting germs. Why should there be in such cases any hesitation about relieving the brain and spinal cord of the products of microbic action? In syphilitic, alcoholic and other diseases which cause intracranial tension the brain should be relieved surgically rather than medically. Drainage when necessary must be free. Many patients seem hopeless on the table, but when so placed that drainage is perfect they soon recover. In washing the field of operation such fluids as carbolic acid and bichloride of mercury must be avoided.

Subserous Appendectomy.—The methods of caring for the stump of the appendix seem to be without end. Many of them lack the common sense of good surgical procedure. Under this heading the subserous method may be classed, because it does not take account of the fact that the peritoneum may be the seat of numerous virulent germs in appendicitis, although to the naked eye it may appear to be comparatively healthy. In a purely catarrhal appendicitis it probably finds its best field. DR. VIGNARD (Rev. d. Chir., Dec. 10, 1901) describes the technic as follows: After the cecum is exposed and drawn out of the wound with the appendix, the tip of the latter is seized with forceps and the organ stretched out by an assistant. About one inch from the base of the appendix the peritoneum is cut through in a circular manner and then the peritoneum is stripped back to the base of the organ. At this point a ligature is placed and the appendix removed. The stump is appropriately treated and then the wide sleeve of the peritoneum, previously described, is drawn forward like a sheath over the stump and there closed by stitches or by ligature.

Treatment of Congenital Cleft Palate by Mechanical Appliances.—The impairment of the normal voice is the only functional disorder resulting from congenital cleft palate which in the opinion of G. E. RAYMOND (Boston Med. & Surg. Jour., Feb. 6, 1902) justifies any attempt at restoration. The inability of the infant to swallow is overcome by the nimble tongue long before the child is old enough for either an operation or an appliance. Raymond believes that perfect speech has never been obtained in these cases by a surgical operation. Mere closure of the cleft is one thing; a physiological palate is quite another. When a case is operated on in early childhood the development of the surgical palate is not commensurate with the growth of the neighboring structures of the mouth and throat; hence what is gained in childhood may be lost later. When an appliance is used it can at any time be replaced by another if the development of the patient demands the change. Raymond has obtained satisfactory results by the use of mechanical appliances in a series of cases which he describes.

Fractures of Upper Third of Femur.—The tilting forward of the upper fragment in fractures of the upper third of the femur cannot be prevented; successful treatment must, therefore, recognize this fact and be influenced accordingly. The lower fragment must be placed in the line indicated by the position of the upper fragment—that is, in a flexed position—and, as the upper fragment is usually displaced outward also to some extent, the limb should be slightly abducted. Since displacement results principally from muscular contraction, extension is strongly indicated and with coaptation splints may secure perfect immobilization. R. A. HIBBS (N. Y. Med. Jour., Feb. 1, 1902) recommends the long traction hip splint for these purposes, such as is used in the treatment of hip disease. By this means, extension is always constant and direct, and may be made to a degree that will absolutely control the muscular spasm. Changes in the position of the patient do not affect it, nor does its force depend upon the weight of the patient. Coaptation splints are of minor importance and can be easily made by attaching straps to the strong iron rod along the upper part of the thigh. An anesthetic is necessary to apply properly

the splint. The adhesive plaster should run up to the fracture and considerable extension should be exerted during the first few days. The leg is raised to an angle of about 135°, but after the splint is applied movements of the spine may be allowed without interfering with the position of the fragments. The perineal straps should be removed each day, one at a time, and the parts bathed and powdered.

Syphilis of Rectum and Anus.—A common mistake, when a physician doses a patient with mercury and diarrhea supervenes, is to presume at once that the cause of the diarrhea is the medicine. J. A. HAWKINS (International Med. Mag., Jan., 1902) emphasizes the fact that in syphilis the rectum should be examined as conscientiously as the eyes, throat and glandular system, for frequently the diarrhea will be found to be a part of the disease. Chancres are rare, are generally found below the internal sphincter and must be attributed to unnatural intercourse. The most common affection is the condyloma, which, either singly or in groups, occasions considerable distress from the burning and discharge; it is frequently mistaken for hemorrhoids. Mucous papules, too, are not rare, are generally situated on the posterior surface of the bowel, and, though they often are ulcerated, only exceptionally cause pain, discharge or bleeding. Gummata may lead to ulceration, obstruction or subsequent stenoses. The treatment of syphilis of the rectum does not differ from that of syphilis in general, with the addition of such surgical interference as may be necessary. Thus, for stenosis, linear proctotomy with subsequent use of bougies is best, though a persisting ulceration often necessitates a subsequent colostomy, preferably in the left inginual region.

Progress in Radiography.—Many and varied are the advances in radiography to be noted during the past year, not only in the apparatus used but also in its wider application to both surgical and medical disorders. Among the improvements in the instruments A. SCHONBERG (Münch. med. Woch., Jan. 21, 1902) mentions the electrolytical interrupter, the orthodiagraph of Moritz which permits the use of the perpendicular ray, and Cowl's apparatus by means of which radiographs can be taken in different stages of respiration. The use of leaden diaphragms permits investigation of such structures as the cervical vertebræ, the head of the humerus, mastoid cells, the interior of the skull, etc. Apparatus for stereoscopic pictures have gained considerable popularity and are invaluable for the examination of congenital luxations. An entirely new field is the photographing of teeth and such deep-seated structures as the antrum of Highmore and frontal sinuses. Now as before the most useful field for the X-rays is to be found in the examination of fractures, especially if two pictures in different planes are taken, and it is only in very obese people and in the epiphyseal separations of children that difficulties may be experienced. Little new is to be said concerning dislocations, except that more accurate reduction is possible. Osteomyelitic foci and sequestra yield very satisfactory pictures, especially in the bones that are not readily accessible to direct palpation; the early stages of tuberculosis cannot, however, be diagnosed, since the process here begins in the bone-marrow, while syphilis and tumors of bone are generally easy to discern. Hardly any advancement has been made in the localization of foreign bodies, nor have the Röntgen rays done much in ophthalmology or in laryngology. An extremely interesting and valuable but difficult matter is the detection of calculi. For stones in the bladder the method is valueless except in the very rare cases in children and in cystoscopy there is a more reliable method of examination. Not much more encouragement can be given in the diagnosis of gall-stones, but it is in detecting renal stones that the X-rays are often of the greatest help, provided the stones do not consist of uric acid, cystin or xanthin, provided they are larger than a bean and provided the patient is not very corpulent. In the examination of accident cases much information can be gained, but care must be exercised not to consider such structures as supernumerary sesamoid bones as fragments of bones resulting from injury. Turning now to internal medicine, it will be found that here also much progress has been made, though the results on the whole are far less gratifying, for the constant movement which the thoracic and abdominal organs undergo makes it clear that sharp plates are only exceptional. For tuberculosis, radiography can be considered only an adjunct to the usual methods of examination and it would be a mistake to base a diagnosis upon the appearance of the plate alone, though valuable evidence as to the amount of infiltrated and destroyed tissue can be obtained and cavities can generally be identified as such. When the process is situated deeply in the lung, as in hemorrhages, infections, abscesses, tumors and echinococcus, percussion and auscultation often yield unreliable data and much may be expected from the Röntgen rays, which are also serviceable for the investigation of the position and amount of fluid in the various forms of pleurisy with or without air. The position of the diaphragm, limited unilateral excursions of this muscle and the presence of a diaphragmatic hernia can be sometimes recognized. The exact determination of the heart boundaries has been rendered possible by the orthodiagraph, even in cases of advanced emphysema or in women with large breasts, on whom percussion cannot be employed, and by means of no other method can the position and size of the right auricle be ascertained so well. In the following other conditions the Röntgen rays are of inestimable value: Aortic aneurisms, especially with the aid of oblique transillumination, mediastinal tumors, stenoses and diverticula of the esophagus, which show clearly when the patient is directed to swallow a wafer with bismuth, and in the various changes in size and position of the stomach, when with the aid of bismuth the lower border becomes distinct. The detection of drugs, such as arsenic, in the stomach and intestines is a possibility which is being diligently investigated. Last, but not least, is the value of Röntgen's wonderful discovery from a therapeutic point of view, especially in lupus, scrofuloderma, lupus erythematodes, eczema, rosacea, acne, prurigo, sycosis and favus.

Adhesion Breaking.—Adhesions within joints are always troublesome and their cure determines the degree of satisfaction which the patient feels in his case. G. W. ORD (Lancet, Jan. 12, 1902) states that to break down adhesions without an anesthetic is often a matter of necessity. The passive motion which follows the breaking down is always a very painful proceeding and frequently takes the form of exquisite and repeated agony. The pain may last a long time after the manipulation has stopped, so that the patient dreads the appearance of the physician for the treatment. The method which he recommends consists in fixing the part above the stiff joint by means of the surgeon's left hand to the bed or the table and then quickly causing the movement in the joint. Adhesions in the wrists, shoulders and knees are too often broken down without getting the patient into a good position. It is a mistake to treat adhesions of the shoulder or the wrist with the patient sitting or standing. A large amount of pain is caused with comparatively little result, for the reason that the patient is in the best possible position to resist. With regard to the knee-joint the muscles around it are so strong that the advantages of his

method are at once apparent. In detail his technic is the following: For the shoulder-joint manipulations, the surgeon stands behind the patient's head, while the latter lies flat on his back on a hard mattress. The surgeon's hand is placed flat on the clavicle of the affected side, pinning the patient to the mattress or the table. The right hand of the surgeon then takes the extremity at the elbow and raises the latter joint until it is on a level with the shoulder joint. In the case of the wrist the patient's forearm is placed on the table in the supine position. The surgeon's left hand holds the forearm to the table, while with his right he grasps and flexes the patient's hand quickly to a right angle. Finger-joints are treated in the same way. The hand is pinned down to the table with its palm upward and the manipulation is carried forward with the right hand of the surgeon. In treating the knee the patient lies prone upon the bed and the surgeon's left hand grasps the thigh just above the knee and holds it firmly to the table or bed. The right hand then seizes the leg just above the ankle and quickly makes a flexion at the knee. There must always be some pain when adhesions are broken down, but this quick method makes it momentary. A large amount of joint movement is obtained at once by means of far less force than would otherwise be necessary. The resistance of the patient, which in other methods is a large factor, becomes a very small one. The duration of the after-treatment is also rendered less because at the first effort a larger amount of mobility is obtained.

Amputation and Sepsis.—The question as to whether amputation of a limb is a justifiable operation in general sepsis following a local process is discussed in two articles by H. BRAUSER and H. DOERFLER (Münch. med. Woch., Jan. 21, 1902). The former is of the opinion that amputation is indicated as an early operation in those severe cases of sepsis in which, despite free incision, the process rapidly extends and life is in imminent danger, and as a late operation when wide incisions have also been made, but no reactive powers on the part of the individual are noticed and the local and general symptoms continue unabated. The second author, on the other hand, finds that in the first set of cases, usually induced by the bacillus of malignant edema, amputation never stays death, while in the second set it is sufficient to incise up to the limits of the inflammatory edema, and to increase these incisions if the edema is found to spread, even if this be up to the trunk. Numerous cases are cited in which even cocci were found in the blood and metastatic foci had already formed and in which this procedure was life-saving without the loss of a limb.

Hernia in Infants.—Great anatomical defects in the walls of the trunk are usually the primary cause of hernia in infants. J. D. RICE (Lancet, Jan. 4, 1902) reports a case of strangulated inguinal hernia in an infant nineteen days old with operation and recovery. On examination he found a tense swelling partly filling the left side of the scrotum and the inguinal canal, without impulse when the child cried, and with a doubtful or dull note on percussion. The skin over it showed edema and redness. The subcutaneous tissues were also involved. The swelling was absolutely irreducible, very painful and tender. There was no vomiting and the general condition of the patient was so good that an evaporating lotion was prescribed and the child put to bed, with its buttocks on a pillow, with the diagnosis of a possible hydrocele of the cord. The next day, however, all the bad symptoms appeared—violent vomiting, blood and mucus with the stools, and prostration. At the operation, which was done as soon as possible, a very tight stricture at the upper end of the inguinal canal was found. When this was divided the gut slipped back into the abdomen. The intestine was dark in color, but not black. The wound was closed in the usual method and the child, although in a bad condition on the operating-table, soon rallied and was feeding at the breast a few hours after the operation. Convalescence was uninterrupted and at the end of two weeks the wound had entirely healed by first intention. Nine weeks after the operation there was only a small scar present without bulging even when the child cried.

Vesical Calculi.—The promptness with which a diagnosis of stone in the bladder is made is an important element in the prognosis. K. DOHRN (Deut. Z'schr. f. Chir., Dec., 1901) says that if examination with a stone-searcher or with a cystoscope is impossible, either through stricture of the urethra or enlargement of the prostate gland, the X-rays should always be resorted to. In fact in all cases a radiogram would be advisable because it shows at one sitting such features as the size, position and number of the stones. Unfortunately the great value of the X-rays for recognizing stones is up to the present not yet appreciated. The difficulty seems to be in the general ignorance of the fact that the kind of stone influences the picture. Phosphatic stones are the most penetrable and therefore give the poorest picture. Uric-acid stones are less penetrable and the oxalic acid stones are the most opaque. While authors differ as to this precise relationship, in the main this is the best classification with reference to shadows they cast on the plate. Another important point is the length of exposure, which in general terms should be short, especially with the more easily penetrable bodies. The experience of the writer in this last particular is that an average exposure of two and one-half minutes is enough. On the other hand, there are some cases in which a shorter and others in which a longer exposure is necessary; so that the difference between them would be represented by one minute for the shortest and two minutes for the longer times. A very important field in which a radiograph is serviceable is that in detecting stones in diverticula of the bladder. It is precisely in this class of cases that other means of diagnosis are apt to fail, leaving this method in sole possession of the field. The author is certain that, as knowledge of the X-ray increases, the frequency with which it is available for medical purposes will be increased.

Interstitial Hernia.—This form of hernia is so rarely encountered that many operators overlook its essential nature when in the hurry of an operation they unexpectedly come upon it. P. BINGER (Rev. de Chir., Jan., 1902) presents a long discourse on the subject and advances the following propositions concerning it: It is necessary to apply in man the term inguino-interstitial hernia to those congenital ruptures which are complicated by ectopia testis and in which the hernia itself extends into the thickness of the abdominal wall, winding more or less among the musculo-aponeurotic planes. Such hernia present two principal varieties—in one it is distinctly parietal, and in the other in addition to being intraparietal it is scrotal also, through a secondary sac or diverticulum which passes through the external inguinal canal and ring. The intraparietal part of the sac, is for the most part a finger-like prolongation or process which turns outward toward the anterior superior spine of the ilium. It is usually pointed much like the finger of a glove, has all the characteristics of a congenital sac and usually contains the viscus because the scrotal prolongation is usually so narrow that it will not admit it. The external inguinal ring is usually closed excepting in the cases in which a scrotal sac exists as well as an interstitial sac. Sometimes it is sufficiently patent to permit the passage of the testis. The internal inguinal ring is often placed a little higher and a little farther out nearer the anterior

superior iliac spine than is usually the case. It presents therefore a congenital displacement which has been so described by Meinhardt-Schmidt. It is necessary to distinguish with care these cases from those in which the deep inguinal ring is twisted and displaced inward toward the abdominal cavity, chiefly by efforts at reduction of the hernia. In the space between these two rings the intraparietal sac usually spreads out between the aponeurosis of the external oblique muscle and the transversalis fascia. It is not unusual, however, to find its anterior surface covered by the internal oblique fascia. Sometimes the sac sends forward a deep prolongation between the transversalis muscle and the transversalis fascia. These facts make this kind of hernia difficult to distinguish from inguino-interstital hernia complicated by a properitoneal hernia. The testis occupies a varying position in the hernia sac. Sometimes it is absent, thus complicating the hernia by a cryptorchidia. In the largest number of cases the testis is within the inguinal canal, sometimes fixed near the internal abdominal ring, more commonly just inside of it. It may also be situated lower down. Occasionally it is found at the external abdominal ring, which it then closes as a cork does a bottle. When the hernia is intraparietal and scrotal at the same time the testis may be found in the scrotal diverticulum of the sac. It may have this position through being slowly pushed forward. The organ usually presents a marked degree of arrested development. There are also at the same time a marked atrophy and a manifest weakening of the muscular planes and fibrous tissue of the abdominal wall. The cord is often short and adherent. Many bands of fibrous and muscular tissue serve to hold it down and they must be divided before it can be passed into the scrotum. Sometimes the cord is too short to permit this at all. It is certain that in many cases which present the characteristics of inguino-interstitial herniæ the testis in a state of intra-inguinal ectopia is situated in a sheath of its own entirely distinct from the sac of the hernia. There is then the rare condition of a proper tunica vaginalis testis, while the hernia is both intraparietal and scrotal in addition. In very rare instances inguino-interstitial herniæ which closely resemble the same class in men are found in women. The same two classes of intraparietal herniæ are found; one in which the type is pure with the sac confined to the muscles of the abdomen, and the other in which the type is mixed, adding to the foregoing a prolongation through the external abdominal ring into the labium major. The treatment of these herniæ should always be operative because it is almost impossible to retain them with a truss. The hernia should be approached by an incision of the external oblique muscle parallel with its fibers. The testis as a rule should not be retained. The one exception is when it is in a healthy condition and may be passed into and easily retained within the scrotum where it belongs. It would be better when possible to save it in children and youths who may by later development overcome its ectopia, but after the twenty-fifth year it had best be removed. In repairing the abdominal wall the surgeon will meet his greatest difficulties. If the method of Bassini appears to be insufficient to cover the opening it is best to reinforce that method by taking a flap of fibers from the anterior wall of the sheath of the rectus, turning it outward and downward over the inguinal canal and sewing it in place there.

Cancer of the Lip.—In no part of the body as in the face is cancer so slow in progress. Consequently its surgical treatment is more hopeful than elsewhere. L. J. JANOWSKY (Arch. f. klin. Chir., 1902, B. 65, H. 2) gives the following points as to the present position of the surgical world toward this disease: (1) Radical operation for cancer of the lip belongs to the class of safe surgical procedures. The healing of these wounds is so favorable that by far the greatest number of them are well in from nine to fifteen days. (2) The lymphatic glands in the submental and submaxillary region should always be removed. The latter must especially be sought for and ablated at the same time as the submental region is opened, because it is in this space that most of the secondary deposits occur. (3) When necessity indicates, no one should hesitate to resect the lower jaw because by so doing a radical cure is often obtained which would otherwise fail. (4) The lymphatic glands are usually attacked in cancer of the lip rather early, sometimes even after two or three months. But in a large number of cases even the presence of such inflammation does not shut out the chance of a radical cure. In some cases in which the glands are not apparently involved a recurrence in them will occur apparently almost as actively as if they are clinically attacked. (5) Favorable results of operation may be looked for in about forty-nine per cent. of the cases. (6) Recurrences appear in the majority of cases within six months after the operation, some during the first year, and a few between the first and the second years. (7) As a rule the return of the disease begins at the seat of the original lesions or in the submental space. (8) The duration of the process has a direct bearing on the result of the operation. If the cancer is a rapidly progressing one, the outlook is necessarily bad, but in those that grow slowly an operation may be undertaken sometimes a year or two afterward and still be successful. (9) Advanced age of the patient is hardly a contraindication to the operation, because good results have been obtained at an age of from sixty to seventy years. (10) Secondary operations upon return of the cancer may be undertaken; sometimes they will prolong the life of the patient, but necessarily only for a short time. (11) Cancer of the upper lip is recorded nineteen times less than cancer of the lower lip. In women it is ten times less common than in men. This is in the author's record of one hundred and seventy-eight cases. In 12 of his series, it was impossible to find that social position or occupation had any direct bearing on the disease. Advanced age (sixty to seventy years) seemed to be the greatest cause. The rapidly fatal cases apparently make up about twenty-five per cent. of the records; the slower processes, fifteen per cent., and the other sixty per cent. may be called the mean class.

Ascites.—This symptom of several conditions may be entirely removable by surgical means. H. ITO and K. OMI (Deutsche Z'schrift f. Chir., Dec., 1901) have been experimenting upon animals as to the possible causes of ascites and its remedy by surgical means. From the experiments they drew the following conclusions: Dogs as a rule perish in a short time with the symptoms of bleeding if their portal vein be suddenly and totally tied off. This happens whether the ligature is placed just above or just below the juncture of this vein with the gastro-splenic vein. With repeated progressive tying of the vein step by step toward the liver, beginning at its small tributaries of origin, animals may recover until the confluence of the two veins, as just stated, is reached. As soon as the ligature is placed beyond this point they die, but usually without such severe symptoms as when the vein is tied off at this point at the first sitting. If the omentum be caused to adhere to the abdominal wall and then after a while the vein is tied, some of the animals will perish and some will not. The same thing occurs if the omentum is similarly adherent outside of the peritoneal cavity. It seems therefore that it is not the location of the ligature but the extent of adhesions between

the omentum or other abdominal organs and the wall of the abdomen which determines whether or not the animal lives or dies. He lives if the collateral circulation be sufficiently active through these adhesions. The formation of adhesions and the inclusion of collateral veins within them are what occur when the omentum is transplanted in this wise. It is interesting to note that animals which recover from the last procedure remain well for months afterward and often increase in weight. The clinical application of these experiments is that in ascites the surgeon should seek to cause a widespread general adhesion as far as possible between the organs of the abdomen and the wall and between the organs themselves. The fixation of the omentum is really only a part of the whole process. It appears to make little difference whether the omentum is stitched to the wall within or without the peritoneal cavity. The important thing is that the intestines, the liver and the spleen should also be made widely adherent to the wall. Perhaps the most active means of promoting this adhesion would be a general tamponade of the whole abdominal cavity by means of a very long strip of sterile gauze, which should be tucked carefully into the pockets and angles of the peritoneal cavity. After twenty-four hours the packing could be removed.

HYGIENE.

Propagation of Yellow-Fever by Mosquitoes.—The presentation of collected statistics and observations on this subject by the chief sanitary officer of Havana, W. C. Gorgas (Phil. Med. Jour., Jan. 4, 1902), forms a strong argument in favor of the view that the *Stegomyia* mosquito is the only means of conveying yellow fever and that fomites can no longer be considered as carriers. Yellow fever, which has been endemic in Havana for 150 years, caused an average of 410 deaths from the first of April to the first of December, for the years since 1899, with a maximum of 1,175 for the year 1896 and a minimum of 79 for 1899, but this year only caused five deaths, although the chances were increased by the presence of a greater number of non-immunes than ever before. Although at first some precautions were taken against fomites, these have all been abandoned, including rigid quarantine and disinfection of fabrics and clothing. Attention was directed entirely to the mosquito, the house of an infected patient was screened, as many mosquitoes as possible were killed, and in addition oil was poured on all suspected breeding-places. General sanitation is in addition most important.

THERAPEUTICS.

Gelatin in Melena.—The hemostatic properties of gelatin show themselves better perhaps in melena neonatorum than in any other condition. A. Holtschmidt (Münch. med. Woch., Jan. 7, 1902) finds that with the old method of treatment 50 per cent. of the children are lost, while the injections save nearly all. It is better to inject a fairly strong 2 per cent. solution, since one can readily control its sterility, owing to the fact that it solidifies on cooling and any bacterial growth would readily show itself. Fifteen c.c. of the solution which have been kept on a water-bath for from five to six hours are injected into the subcutaneous tissues of the breast or thighs, generally in two places to prevent undue stretching of the skin. If necessary, the procedure may be repeated several times. Bad after-effects were never seen, not even a rise of temperature.

The Serum of Trunecek.—The inorganic serum introduced by Trunecek as a valuable therapeutic agent in arteriosclerosis contains all of the alkaline salts normally present in human blood-serum; the solution is concentrated, but the relative proportions of its alkaline constituents are maintained. The technic of its clinical use is described by Leopold Levi (La Presse Méd., Jan. 15, 1902). Trunecek begins by injecting 1 cubic centimeter of the solution, and the injections are gradually increased till 5 to 7 c.c. are given daily. The injections are given alternately on the left and right sides, the forearm and gluteal region being favorite sites. The remedy is applicable to cases of sclerosis of the great vessels, arterial cachexia, cerebral arteriosclerosis, and chronic rheumatism. Levi reports a case similar to those previously cited by Trunecek, characterized by attacks resembling angina pectoris, but occurring nightly for many months. After a single injection of inorganic serum relief was obtained. Satisfactory results were also obtained in cases of cerebral arteriosclerosis with symptoms limited to one side of the body. Not only were local manifestations of the disease, both sensory and motor, greatly modified, but general symptoms were likewise controlled.

Cure of Cancer of the Esophagus by Cancroine.—Cancroine is a toxin of undefined chemical composition isolated from cancerous growths. In its physiological properties it is identical with neurine, a toxic base obtained from fresh cadaveric tissues. It is maintained by A. Adamkiewicz (La Presse Méd., Jan. 22, 1902, that when injected into the circulation of cancerous subjects, cancroine exercises a specific action on the malignant growth, producing a necrosis of the carcinomatous elements with or without inflammatory reaction, with resorption and elimination of the necrotic elements. Adamkiewicz believes that he has rendered a double service to science and humanity in publishing the results obtained by him in the treatment of cases of cancer by cancroine. Four recent cases are described, all of them purporting to be cases of cancer of the esophagus. The first patient was a man sixty-six years of age, with a three-months' history of increasing dysphasia and emaciation. Even small bougies were obstructed at the lower end of the esophagus, 42 cm. from the dental arch. Six days of treatment by injections of cancroine produced a notable functional improvement and at the end of this period a sound of 5 mm. diameter could be introduced into the stomach. As the disintegration of epithelial cells in such a brief period is inconceivable, Adamkiewicz believes that carcinomatous growths are made up of protozoa. In a second case symptoms of stenosis were rapidly disappearing under the influence of injections of cancroine when the treatment was interrupted. Dysphagia at once returned. A short time afterward the injections were resumed and within two days an amelioration of the patient's condition was re-established.

DERMATOLOGY.

Oidiomycosis of the Skin and Its Fungi.—Since attention was called to the existence of blastomycetic dermatitis in Chicago and vicinity by Gilchrist the number of cases observed has rapidly multiplied. As the result of a detailed study of a number of such cases H. T. Ricketts (Jour. Med. Research, Dec., 1902) concludes that the so-called protozoic disease of Posadas, Wernicke and others, Busse's and Curtis' saccharomycosis hominis, and Gilchrist's blastomycetic dermatitis are various manifestations of the same disease. The condition in the skin possesses constant clinical and histological characteristics which separate it positively from all other skin diseases, particularly verruca, tuberculosis, carcinoma and syphilis. The organisms isolated from various cases differ from each other in minor respects, but are so closely related morphologically and biologically as to justify their inclusion in a common genus. They are thus analogous in a

pathogenic sense to the fungi which cause actinomycosis and to those causing trichophytosis. The variations among the organisms allow the recognition of three morphological types: (1) Blastomycetoid (yeast-like); (2) oidium-like; (3) hypomycetoid. There are two histological forms of the disease in the skin, the eosinophilous and the non-esinophilous, the former being associated with the mold form of the organism. Oidiomycosis is an appropriate name for the conditions caused by the organisms and oidiomycosis cutis for the disease as it occurs in the skin.

MEDICINE.

Chorea and Helminthiasis.—The obscurity in which the pathogenesis of chorea lies is evidenced by the many theories concerning it; its origin has been variously considered as rheumatic, nervous or infectious. M. DE LUNA (Gazz. degli Osped., Jan. 12, 1902) has noted a certain relation between helminthiasis and chorea. In a case recently observed, microscopical examination revealed ova in the feces, and the administration of anthelmintics was followed by the expulsion of three ascarides and many segments of tinea solium, with the result that there was entire abolition of choreic symptoms.

Membranous Colitis.—Membranous colitis is a disease which in most text-books has generally been dismissed with a few words relative to the "membranes." That it is, however, a disease of very wide distribution and often of great diagnostic importance is growing to be more and more thoroughly appreciated, in consequence especially of the efforts of the latter-day functional school in medicine. The subject has been treated in his characteristically broad, yet thorough, fashion by M. FOSTER (Edin. Med. Jour., Feb., 1902). The name of the disease is, in his opinion, to a certain extent a misnomer, since literally it embraces only those typical and unmistakable cases in which true fibrinous casts are passed from the bowl, whereas these represent only the *terminal* stage of the disease. The earlier stages of such cases, however, and milder types, also, of the affection, illustrate every variety of mucous discharge; all of these conditions, therefore, are to be considered as having a common clinical basis. There are three cardinal symptoms of the disease: Passage of mucus, irregularity of the bowels, and abdominal pains. The distinguishing feature of the disease really consists in the character of the stools. The mucus may be present in every variety of form.

In the class of milder cases there are scybalous masses. Their presence often leads to an incorrect diagnosis, the case being considered as one of catarrhal colitis whereas it probably is a case belonging to the class of mucous colitis. The feces may be merely coated with a glairy film; such cases are very apt to be mistaken for examples of mucous colitis and therefore wrongly treated. In the more advanced stages of the disease, mucus may be passed separately, either in small globular lumps resembling frogs' spawn, or as large solid lumps like pieces of jelly-fish. In the most marked cases, the mucus is condensed into membranes, which may be passed as annular casts of the intestine, or in loose shreds or strips. The membranes sometimes present an actual cast of the wall of the gut, in which the crypts of Lieberkühn are distinctly visible. Microscopically, these membranes consist of cells embedded in a transparent matrix, containing also phosphates, cholesterin crystals, and bacteria, the B. coli communis being in the largest proportion. In addition to mucus, in a few of these cases there is another foreign substance, namely, intestinal sand, which appears as brownish red particles, much resembling uric acid. This "sand" is rarely seen except in cases of membranous colitis, and may fairly be considered as typical of one form of the malady. As regards the stools themselves, they present no other constant characteristics. Turning to the second cardinal symptom, the majority of patients have suffered from constipation. Diarrhea occurs not infrequently, but it is of the irritative variety and does not serve to unload the bowel. Pain is at some time or other a marked symptom in most cases. It may vary in intensity from an attack of mild colic to pain of such severity as to suggest the possibility of perforation. It may take the form of erratic pains over the entire abdomen, or may be localized in the region of the ascending colon with tenderness in McBurney's point, or, finally, may mimic gastric discomfort. Very rarely it is absent. Physical examination reveals cutaneous hyperesthesia, or enteroptosis, etc., but nothing pathognomonic. Constitutional symptoms are slight. In some cases there is in each attack slight fever, the temperature during the period that membranes are being passed varying from 99° to 101°, or even 103° F. The pulse is changed only in relation to the fever or to extreme pain. During the attack, the tongue is generally coated, sometimes with thick white fur, but more commonly with a fine yellow layer. A characteristic and interesting feature of the disease is the fact that most of its victims suffer from neurasthenia, either of the moody or of the erethistic type. The natur. of the disease is probably that of a secretory neurosis, finding its expression in hypersecretion of mucus, coupled with spastic constipation, whereby the mucus is molded in the colon into membranes. As has been said, sufferers from the disease are almost always neurasthenics, and the family history will generally show a marked neurotic taint. In addition, gout undoubtedly plays an indirect part in the causation of many cases. The patients are for the most part lithemic, and have the nervous instability so often seen in those derived from gouty stock. In the management of the disease, the first step should be the treatment of the neurasthenia. A proper amount of exercise should be taken, and the food should be selected with a view to eliminating all irritating constituents. To regulate the bowels, castor oil or enemata of olive oil are useful. During the attack, rest in bed and fluid diet are routine practice, and morphine may be necessary. Nerve tonics are often useful; nitrate of silver in doses of one-thirtieth of a grain is often of great service. In the more prolonged and hopeless cases, the performance of a right-sided colotomy is advocated, with a view to giving the bowel a rest. Operation should never be too long delayed, as, with all its discomforts, it affords a chance of escape from even greater miseries.

On Addison's Disease.—To determine if the blood of patients suffering from Addison's disease possesses toxic properties, J. BRUNO (Münch. Med. Woch., Jan. 28, 1902) injected the blood-serum from a case of the more chronic form of the disease into frogs. A comparison of the results gives no difference between the toxicity of the patients' blood and that of normal serum. The author does not, however, consider his experiments conclusive and recommends that the blood of patients running a more acute course be tested in a similar way.

Etiology of Rachitis.—From the fact that in rachitis both the relative and the absolute weight of the thymus gland is below the normal, that the gland reaches its highest development when bone-proliferation is most active and that during this period it contains those salts which are most necessary for the building-up of osseous tissue, F. MENDEL (Münch. med. Woch., Jan. 28, 1902) concludes that a close connection exists between the disease and the organ.

Viewed in this light the enlargement of the spleen might be considered a vicarious hypertrophy. Animals experimentally deprived of their thymus showed marked changes in the structure of the bones and the anemia and profuse perspiration so characteristic of rachitis could also be duplicated. Accordingly either fresh glands or the commercial tablets were tried in over 100 cases which were classified as follows: (1) Those which showed only the prodromal symptoms; (2) those in which deformity of the osseous system was the chief feature; (3) those marked by spasm of the glottis, and (4) those in which splenic enlargement was the most important sign. In all marked improvement was noted after from three to four weeks and dentition and the closure of the fontanelle proceeded satisfactorily. Unlike thyroid extract, no untoward symptoms are to be expected after even large doses.

Dyspeptic Asthma.—This term should be reserved for those cases of asthma which are free from any involvement of the chest organs and in which the affection is in distinct connection with the digestive apparatus. M. EINHORN (Jour. Amer. Med. Assoc., Feb. 1, 1902) divides these cases into two groups: (1) Those in which dyspeptic asthma appears periodically in an acute form; (2) those in which it assumes a chronic type. The first group is characterized by asthmatic attacks at more or less prolonged intervals, without apparent cause or after excesses in eating, drinking, or smoking, or after undue excitement. The attack is usually severe, often with extreme dyspnea, cyanosis, almost collapse. The second group embraces the larger number of cases and may again be divided into those in which the asthma appears soon after meals or those in which it comes on several hours later. The first class resembles and is often difficult to distinguish from angina pectoris but is more amenable to treatment directed toward the digestive apparatus. The angina, however, may be superadded and is then apparent by cardiac involvement, as indicated by the sudden appearance of albumin on the urine or irregularity of pulse, etc. Although no constant anomalies of the secretory condition of the stomach were found in his cases, yet a considerable number suffered from achylia gastrica or hyperchlorhydria, both conditions probably due to the undue irritation of the gastric mucosa. When the gastric secretion is normal it is necessary to assume a condition of hyperesthesia of the stomach to account for the cause. The so-called floating liver was also found in 17 per cent. of his cases and is also probably a factor. The treatment must be directed toward relieving any disorders of the digestive tract and also towards correcting any malpositions of the abdominal organs, principally the liver. Regular mode of life and avoidance of too much tobacco and alcohol, also of mental worry and strain, are essentials.

NEUROLOGY.

Meralgia Paresthetica.—This name is applied to a peculiar nervous disturbance manifesting itself in paresthesia, anesthesia and pain in the femoral course of the external cutaneous nerve. The paresthesia takes the form of numbness, pricking, formication, or a feeling of coldness, present, according to M. KAHANE (Klin. therap. Woch., Jan. 12, 1902), in an area bounded in front by the middle of the anterior aspect of the thigh, behind by a line separating the external from the posterior surface, above by Poupart's ligament and extending below to within three or four finger-breadths above the condyles. The anesthesia shows itself subjectively by a sensation as if wool were present between the clothes and skin; objectively it is generally found to be only poorly developed, but also affects the temperature sense, though there may be hyperesthesia toward electricity. Sooner or later, pain will appear, generally after excessive use of the parts and never equaling in intensity the pain of tabes, so that such disturbances of function as limping hardly occur and a short rest causes their disappearance. Trophic disturbance, such as muscular atrophy, glossy skin, and vasomotor changes, are rare. General symptoms, more particularly inequality of the pupils and changed reflexes, have been included among the symptoms, but are more often to be ascribed to coincident, more serious nervous disease, such as tabes or general paresis. The etiology is to be found in local trauma, exposure to cold, infections, intoxications and dyscrasiæ, such as syphilis, typhoid and chronic alcoholism. Generally the patients are males between the ages of thirty and sixty years, who are obliged to stand or walk a good deal; often flat feet also are present. Two theories have been advanced to explain the condition—that of congestion of the nerve and that presupposing an active neuritis; a sufficient number of pathological examinations have not yet been made to decide the question, though the weight of evidence supports the latter. The course is chronic and intermittent, the diagnosis easy, and the treatment either medical and symptomatic or surgical by resection of the nerve.

SKIN AND GENITO-URINARY.

Ringworm.—Although ringworm of the skin is one of the easiest skin diseases to cure, rapidly disappearing under the action of almost any parasiticide, ringworm of the scalp or beard frequently taxes the ability of even the clever specialist for many months. G. T. JACKSON (Med. Rec., Feb. 1, 1902) has been using a very simple but most effective remedy in these cases for two years and is highly enthusiastic over the result. A dram of the crystals of iodine is added to an ounce of goose grease and this preparation is applied to the affected areas twice a day till some redness and swelling appear. It is then applied once a day until a cure results. Goose grease seems to be an excellent penetrating excipient, but it is necessary to make sure that it is the genuine article. The hair falls out of the patch and epilation is not necessary. The first applications are apt to be a little painful for a few moments, but after that even little children do not complain of the pain. If much reaction with swelling is caused the use of the remedy can be suspended for a few days, and a salicylated oil of three-per-cent. strength can be used. As soon as the reaction subsides the iodine remedy should be resumed. Three weeks are usually sufficient to secure a cure of barber's itch and about the same time for ringworm of the scalp.

Syphilis Maligna and Syphilis Gravis.—The early appearance of numerous ulcerations over the entire surface of the body is the chief characteristic of malignant syphilis. Associated with this condition, says LOCHTE (Monatsh. f. prak. Derm., B. 32, No. 10) is a marked loss of strength. The patient becomes emaciated, loses his appetite, looks wretched. The painful ulcers prevent sleep and may produce fever which persists for months. The practitioner is struck by the inefficacy of the mercurial treatment in these cases. Cases of severe syphilis which approach the malignant form in virtue of their localization in vital organs or on account of their combination with other pathological conditions, or which in their specific manifestations resemble syphilis maligna, Lochte groups under the name syphilis gravis. The most dangerous chronic complication of syphilis is alcoholism. Phthisis threatens the life of the syphilitic individual doubly, for not

only does syphilis often assume a grave form when the complication exists, but the pulmonary disease makes rapid strides. Malaria and tropical anemia en- Harn- u. Sexualorgane, B. xii., H. 6) communicates age and pregnancy are also dangerous complications. None of these conditions, however, can be said positively to determine syphilis maligna.

Lesions of the Rectal Mucous Membrane as a Cause of Cystitis.—Wreden was the first to assert that lesions of the rectal mucous membrane in the vicinity of the prostate are invariably followed by cystitis, and the first to show that in cases of experimental cystitis in dogs the urine contains bacteria introduced into the rectum. Faltin (Centralbl. f. d. Krankh. d. Harn- u. Sexualorgane, B. xii., H. 6) communicates the results of his experiments on 100 dogs as follows: A lesion of the rectum in the vicinity of the prostate, whether superficial or deep, is not followed by cystitis, nor are intestinal bacteria found in the urine in these cases, provided the bladder at the outset is free from disease, and provided also that the rectal lesion is not followed by either general systemic infection or peritonitis. Serious lesions of the rectum may very readily produce general infection, however. Omitting cases of sepsis, Faltin was able to discover cystitis in only one of his many cases, and in but one case was there even a transient bacteriuria. Microscopic examination showed that following the slightest trauma of the epithelial surface of the rectum, numerous bacteria made their way promptly into the lymphatic spaces of the tissue surrounding the rectum, bladder, prostate and seminal vesicles. If the bladder be injured by retention at this stage, the pathogenic germs which are sojourning in the neighborhood may succeed in finding entrance and may thus set up a cystitis.

Gauging Vesical Capacity.—A method for determining the bladder capacity in patients in whom the nervous element is a serious factor for consideration —cases distinguished clinically by a lessened frequency of micturition at night—and in certain conditions in which rest is productive of similar improvement in symptoms, is submitted by G. F. Lydston (Jour. Amer. Med. Assoc., Feb. 8, 1902). This method does not err by proving only the capacity of the bladder while in hyperdistention. The patient is instructed to drink moderately of pure water during the evening, and, when aroused at night by a desire to micturate, to pass water on each occasion into a separate vessel. The greatest quantity obtained at any given micturition represents the maximum capacity of the bladder from a clinical standpoint. Cases in which the frequency of micturition is aggravated at night cannot be gauged in this way and mechanical means must be employed. The chief sources of error here are hyperesthesia of the prostatic urethra and consequent exaltation of the urinary desire, and also too rapid distention of the bladder, producing "surprise" and peremptory muscular reflex in the bladder-wall. The general excitability should be guarded against by sedatives and antispasmodics—a hypodermic of morphine, twenty to thirty minutes before gauging is useful. The local reflexes can be quieted by applications of eucain or cocaine to the prostatic urethra. Whenever, in gauging the bladder capacity, the urine returns at first with some degree of force, but loses this as the test proceeds, it may be safely assumed that temporary distention atony has been produced, and the test will require repetition at another time.

PHYSIOLOGY.

Leucocytosis after Violent Exercise.—The relation between physiological and pathological leucocytosis becomes of increasing interest as our knowledge increases. In order to elucidate to a certain extent this subject Ralph C. Larrabee (Jour. Med. Research, Jan., 1902) has made a study of the leucocytosis occurring in normal men as the result of violent physical exercise. The blood-counts were made within five minutes after the actual finish of a severe foot race of twenty-five miles. In every case a leucocytosis was found varying from 14,400 to 22,200. The differential count showed that the increase was mainly in the polymorphonuclear neutrophiles. The relation between the large and small mononuclear forms was changed, the proportion of large forms being increased. Eosinophiles were both relatively and absolutely diminished. In three or four cases a few myelocytes were found. No abnormalities were noticed in the red corpuscles. Since in this leucocytosis the percentage relations of the various leucocytes is altered from the normal it is certain that it is not physiological in character. More than one factor is concerned in the production of this leucocytosis—probably a temporary mechanical cause, and a toxic cause more slow to develop but lasting as long as the exercise continues.

THERAPEUTIC HINTS.

Muscular Rheumatism.—

℞ Baume de Fioraventi	c.c. 20.0	(ʒv.)
Spt. camphoræ	20.0	(ʒv)
Spt. terebinth	3.0	(ɱxlv)
Chloroformi	5.0	(ɱlxxv)
Menthol	gm. 2.0	(gr. xxx)

Apply with light friction.

—G. Lyon in Le Progrès Médical, Jan. 4, 1902.

Chronic Malaria.—For enlargement of the spleen, rub in twice a day with friction the following ointment:

℞ Iodoformi	gm. 3.0	(gr. xlv)
Ext. belladon	4.0	(ʒi)
Ext. belladon	4.0	(ʒij)
Ol. menth. pip.	gtt. xx.	

and for the general condition take two of the following pills at noon and two at night before meals:

℞ Ac. arsenosi	0.001	(gr. 1/60)
Iodoformi	0.06	(gr. i)
Ferri et potass. tart	0.06	(gr. i)
Ext. bellad	0.03	(gr. iss)
Ext. quinquinæ	0.06	(gr. i)
Quin. sulphat	0.02	(gr. 1/3)
Ext. nucis. vom.	0.01	(gr. 1/6)
Ext. valerianæ	0.06	(gr. i)

For one pill.

—M. Stephanopoulos in La Médicine Moderne, Dec. 25, 1901.

Veratrum Viride in Eclampsia.—Three cases of eclampsia in which the convulsions were promptly relieved by hypodermic injections of c.c. 1.3-1.7 (ɱxx-xxv.) of the tincture of veratrum viride are described by A. Lapthorn Smith (Montreal Med. Jour., Jan., 1902). In one case half a grain of morphine had been injected, and an enema of a pint of salt solution given every two hours without effect. Vomiting was marked and the pulse excessively rapid, full and strong; following the veratrum the vomiting ceased and the pulse came down to fifty-six and was quite soft. A severe headache persisted, however. In the next case morphine and atropine had been given and a pint of blood removed from the arm, but the convulsions did not subside till an injection of veratrum was administered. In the third case three hundred grains of chloral and half a grain of morphine had been given in the course of four days, but veratrum was followed by very rapid subsidence of blood tension and the complete letting up of the convulsions.

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SATURDAY, MARCH 1, 1902.

FATALITY AND EPIDEMICITY OF PNEUMONIA.

SOMETIMES even science may benefit by publicity. The series of pneumonia cases at the school at Groton was the main thing in the public eye for some time, because the President's son was one of the patients. These cases call attention to the possible element of contagiousness in pneumonia, so often noted, and it is to be hoped that the publicity given this idea will serve to make it popularly understood that careless contact with pneumonia patients, and especially with the sputum and other discharges, is not without a certain element of danger.

Dr. Lambert, at the recent meeting of the Section on Medicine of the New York Academy of Medicine, stated as his opinion that the concurrence of the series of cases of pneumonia at Groton was no more than a coincidence. The patients all suffered from frank lobar pneumonia of not very severe type. It was just the form of the affection that might be expected to occur in boys with opportunities to exercise freely in the open air during the changeable, yet always rather inclement weather of the last few weeks.

During the discussion on pneumonia at the Section meeting there was general concordance in the opinion that pneumonia may be epidemic and that its contagious character under conditions that involve crowding and close contact under somewhat unhygienic circumstances, as in barracks, jails, old hospital wards, camps and the like, is rather definitely established. Dr. Burt's suggestion as to the exercise of care in the disinfection of the sputum of the patient and conscientious precautions on the part of attendants to prevent dissemination of such material in any possible way may seem to some to push prophylaxis beyond actual knowledge.

There is no doubt, however, that this is the trend of the most conservative modern medical thought. Predisposition and infection may not often coincide in the persons of those in attendance on the patient, but the risk of such coincidence is sufficient completely to justify the ounce of prevention demanded.

Pneumonia, unlike most of the so-called ordinary diseases, is at the present time on the increase rather than the decrease. While the mortality from pulmonary consumption is notably less than it was a decade ago in most cities, the death-rate from pneumonia is alarmingly greater. This increase in the fatality of the disease has come during a period that has seen the general death-rate, in our larger cities especially, very materially reduced. The average length of life has increased in recent years from something over thirty-one years to nearly thirty-six years. Pneumonia continues its ravages, however, not only unimpeded but actually with additional virulence. Three forms of disease, pneumonia, heart disease and pulmonary consumption, are now the chief nursing sisters of death. Heart disease has become more amenable, at least to symptomatic treatment; consumption has been robbed of its worst terror—its presumed incurability; but pneumonia increases in frequency and fatality almost in a direct ratio with the density of population. As the near future is to see our population gathered more and more in crowded urban centers, there is good reason to take every possible precaution to prevent its spread. Many of the precautions now enforced with regard to other diseases would have been considered practically unjustified a quarter of a century or even less ago. Excess of prudence is not a fault to be compared with fatal relaxation of vigilance.

On the other hand, the picture of the present medical status of pneumonia is not entirely unrelieved. The principal reason for the greater frequency of the disease in recent years is the fact that sanitary science has kept alive many more individuals especially susceptible to the dis-

ease than was formerly the case. Weakling infants who perished in the annual visitations of gastro-enteritis in the summer, delicate children who succumbed to the acute infectious fevers in early years, are now preserved to be the victims of typhoid fever and pneumonia in adolescence. Adults who in previous generations did not survive the ravages of acute infections and gastro-intestinal disease in early and middle life, now live on to the fifth and sixth decades and it is on these especially that pneumonia preys. In a word, the prognosis of the disease is not worse in individual cases despite the increased mortality.

The prognosis of pneumonia really depends on what the patient takes into the disease with him. If his heart be already affected the outlook is indeed gloomy. If his kidneys be seriously affected the hope of survival is scarcely more promising. If the arterial system be degenerated by alcoholic excesses it is in the worst possible condition to respond to the sudden strains put upon it by the crises of the disease. Even in young adults the prognosis is not favorable if there has been a marked tendency to anemic conditions during adolescence that shows an unstable equilibrium of the blood and probably indicates a corresponding failure of the vascular system to develop. For such patients there is scarcely need to appeal to the status lymphaticus to appreciate the reason for the inevitable fatal termination, though this condition undoubtedly plays an especially important rôle in adding to the death-rate from pneumonia in the young.

Specific remedies there are none as yet for pneumonia. No form of treatment does more than aid Nature more or less effectively in the conflict with the disease.

If we are to see a reduction of the mortality from the disease, then, it must be by prophylaxis of the conditions that predispose to its development. There seems no good reason to doubt that the pneumococcus is almost universally prevalent in crowded places. When ventilation is insufficient the micro-organism either takes an additional virulence or the resistive vitality is so much lowered as to make the individual susceptible. For pneumonia cases, then, an abundance of fresh air is not only for the benefit of the patient, but also for the protection of those in attendance. It is the duty of physicians to make this clear to the public mind as well as to warn those especially who have once had pneumonia of the dangers of crowded places, theaters, churches, railroad stations, and the like. There seem to be great possibilities for good in these precautionary measures that will lessen the ravages of the worst of our present-day disease-scourges.

RECENT DEVELOPMENTS IN DIABETES.

The more carefully examinations of urine are made the more frequently are unexpected cases of diabetes mellitus discovered. The number of applicants for life insurance refused in this country every year because of the discovery of an unsuspected glycosuria is constantly growing. There was a time less than ten years ago when diabetes mellitus was supposed to be much more rare in this country than in older countries, but recent statistics are dispelling this illusion. Cases were overlooked a few years ago because of faulty methods of diagnosis that now help to swell mortality reports. Diabetes is increasingly interesting as the new century begins, because of the realization of its commoner incidence than hitherto supposed and because of the mystery that continues to shroud its essential pathogenesis in spite of recent advances in nosology. The discussion of diabetes itself at the January meeting of the New York County Branch of the State Medical Association and of diseases of the pancreas at the annual meeting of the Medical Society of the State of New York brought out some points that are distinct additions to our knowledge of the disease.

One of the most interesting questions with regard to diabetes is its possible contagiousness. In many hundreds of cases the disease has been reported as occurring in both husband and wife, and in rarer, though still quite frequent cases, in members of the same household, sometimes even when not related by blood. The well-known family tendency to the disease would, of course, vitiate any claims made on the coincidence of the disease in the cognate. Careful collation of German statistics seemed to show, however, that conjugal diabetes—that is, glycosuria affecting both husband and wife—occurs in less than 2 per cent. of all cases. This minimum of possible communication would seem to preclude all idea of contagiousness. Coincidence and the influence of very similar modes of life would serve to account satisfactorily for perhaps a greater percentage of incidences of the disease in people living together.

Dr. Abraham Mayer reported at the meeting of the New York County Medical Association a series of cases not yet formally published that materially lessens the force of this objection to the theory of possible contagiousness. If the

urine of the supposedly well marital partner be examined as a routine practise in all cases, when diabetes in husband or wife comes under observation it will be found to contain sugar in at least 6 to 8 per cent. of the cases. This proportion is to say the least a complete justification for suspicion of the communicability of the disease and points out the necessity for further careful investigations along this line. We pointed out editorially in the MEDICAL NEWS about a year ago that the *a priori* assumption on general principles that diabetes was not mildly contagious might readily lead to sad results, while the opposite opinion could only be productive of good and would prove a stimulus to investigators.

As was well brought out by Drs. Thayer and Blumer at the recent meeting of the State Medical Society the pathology of diabetes has been very strikingly illuminated by certain American observations during these last few years. Opie at Johns Hopkins has pointed out the significance of degeneration of the islands of Langerhans in the pancreas in diabetes. If these observations are confirmed they will do away with all the difficulties hitherto associated with the problem of the connection between the pancreas and true diabetes. These structures are not connected directly with the glandular canals of the pancreas, but are in intimate relation with a special arrangement of blood-vessels not unlike the vascular supply of the glomeruli of the kidney, or the Malpighian bodies of the spleen. This histological peculiarity stamps the islands of Langerhans as being associated with the internal secretion of the pancreas. Several years ago Prof. Hansemann of Berlin pointed out that even when the pancreas seemed entirely degenerated portions of healthy pancreatic tissue remained. It seems not unlikely that when the secretory gland substance undergoes extensive degeneration beginning in the pericaudicular portions, the outlying parts of the pancreas, distant from the ducts as are the islands of Langerhans, frequently escape destruction. This accounts for the number of cases in which, despite seemingly complete degeneration of the pancreas as a gland, diabetes did not occur. The reason was that the internal secretion had not been interfered with.

On the other hand degeneration of the islands of Langerhans without affection of the rest of the gland has been found by Opie to occur and these are the cases in medical literature in which diabetes has been reported without any lesion of the pancreas. The lesion might easily escape notice because of the comparatively small space occupied by these collections of specialized cells. When neoplasms have caused apparently complete obliteration of the pancreatic tissue it is not unlikely that some of the islands of Langerhans escaped the invasion of the malignant growth or else the malignant cells themselves, though not true glandular cells, supplied the function of the gland cells from which they are separated by but a generation. It has been known that metastatic cancers of the liver deposited in distant tissues produced bile and a corresponding activity is not too much to expect from pancreatic cells similarly degenerated.

Quite recently a rather surprising observation has been made almost simultaneously in Europe and this country with regard to the effect of injections of suprarenal substance in producing glycosuria in animals. Dr. Blum reported in the *Deutsche Archiv für klinische Medicin*, October 30, 1901, a series of successful experiments in this line. Dr. Croftan, working in the Woodward Fellowship for Physiological Chemistry at the Pepper Laboratory of the University of Pennsylvania reports in *American Medicine*, January 18th of the current year, a number of observations of the same kind undertaken when nothing was known of Blum's work. Croftan is inclined to the opinion that the glycosuria observed by him in animals after the injection of suprarenal extract depends on the action of a diastatic ferment in the suprarenal gland which converts the glycogen of the liver into sugar. In the first formal scientific communication made as the result of work done under the auspices of the recently-founded Rockefeller Institute for Medical Research which the MEDICAL NEWS had the privilege of publishing in the issue of February 1, 1902, Drs. Herter and Richards of New York entirely disagree with Croftan's conclusions. As they point out, Takamine's method of preparing adrenalin almost precludes the possibility of an active diastatic ferment remaining in the finished preparation, since the heat employed to get rid of albuminoid substances, an exposure to 90° to 95° C. for an hour, would make the continued existence of such a ferment extremely unlikely. On the other hand, the injections of adrenalin seem to produce changes in the pancreas that stamp the resultant glycosuria as really of pancreatic origin. The changes noted in the pancreas involve especially the cells of the islands of Langerhans, affecting these much more than the acinous gland-cells. This work, then, would seem to con-

firm Opie's observations rather than controvert them and throws light on the pathogenesis of diabetes rather than adds to the mystery as was at first thought.

At the recent meeting of the State Medical Society at Albany Dr. Chittenden of Yale suggested that the effect of suprarenal extract upon the blood-pressure might well be the secret of its causative influence in glycosuria, since it was already known that disturbances of blood-pressure often led to at least a temporary appearance of sugar in the urine. This last striking observation with regard to the suprarenal will doubtless serve to supplement Opie's work and at length solve all the pathogenetic mysteries that have so long been grouped around diabetes. The outlook is certainly most promising and it is a source of no little pride and inspiration that some of the best of this work in diabetes has been and is being accomplished here in America. *Macte virtute!*

"GLASSING" A SIGN OF NATIONAL DEGENERATION.

"Fightin' all day, Sir, and never saw a Boer. Yas, Sir, we simply blazed away at the kopjes on the chance of hittin' a Boer or two." In a trenchant article on recent ophthalmic work in the British Army, Dr. John Grimshaw tells us that this was a very frequent statement from the invalided South African soldiers on being asked whether their eyes had given them trouble when shooting on the veldt. American military surgeons also had occasion to direct careful inquiries into the relation of vision to efficacy in the various departments of the Army and Navy in our recent war with Spain.

Because of the interest shown in these two countries, it can but prove profitable to compare the standards of vision established in Continental Europe with those in force in England and America. For this purpose one cannot do better than turn to an article on "Standard of Vision" by Captain Miles Standish. In the first place the enlisted European conscript is permitted to wear glasses; this, except under quite unusual conditions, is prohibited in England and America.

In the French Army regulations of 1894, which are at present in force, the requirement of vision after correction of myopia is ½ with both eyes together, and not less than $^1/_{10}$ in the poorer eye; in cavalry and artillery, normal vision in one eye and not less than ½ vision in the other.

In Italy the Royal decree of September 26, 1881, rules that reduction of vision to ⅓ the normal in the right eye, or to $^1/_{12}$ in the left eye, although vision in the right eye is up to normal, if caused by organic changes or incurable disorders of the globe of the eye, a very important qualification, incapacitates for military service. The latest Belgian regulations determine that reduction of vision in the right eye to ⅓ of normal causes exemption from service, although reduction of vision below this limit in the left eye does not exempt from duty. The Swiss Army regulations for the minimum of vision for the artillery is normal; for the infantry ⅗, and for all other troops ½. Whenever the vision in one eye is normal, vision in the other may be as low as ⅛; but these conditions do not allow men to be employed as riflemen unless the eye with normal vision is the right eye. The rules in the Danish Army exclude from military service all men having vision below ⅕.

These standards are too low to be brought into relation with those employed in the examination of candidates for the United States Army, which, as would be expected, are by long odds the highest in the world. They are $^{20}/_{20}$ in *each* eye, without glasses. That this standard is unnecessarially high may be judged from the fact that when, upon the outbreak of the late war, large numbers of members of the National Guard were rejected for "physical disability" by the United States examining officers, the natural inference among the laity was that the State troops were mostly cripples and invalids. A $^{20}/_{20}$ vision would theoretically enable the soldier to see a man six feet high at a distance of 1,375 yards, but as a matter of fact, owing to atmospheric and other conditions, a man could not be distinguished at any such distance.

In England it would seem that, while the visual tests are probably grossly tampered with by bribing and other nefarious methods, and while, as is frequently the case, the Englishman has a more or less archaic method of estimating the eyesight, it might be interesting to question whether in the last forty years the national eye, if one may use the term, has become dimmed and whether the lamentable picture of Thomas Atkins shooting at kopjes in lieu of Boers is a result of *this* or of faulty or mismanaged examination. Grimshaw asks why, if the War Office grant artificial teeth to men who are likely to become efficient soldiers, should spectacles be withheld?

There is little doubt that England will soon realize that she must take her place in company with the Continental people and furnish glasses as they do. Obviously this is an admission that

she has in the last half century lost ground physically. It would seem in retrospect that this question of eyesight in the Army affords a tolerable insight; a sort of indicator to the well-being of a nation. Continental Europe has "glassed" a large proportion of her soldiers, this proportion increases from day to day and it is noteworthy that the ratio is highest in the poorest lands. Lord Kitchener's strictures on the physical unfitness of the proud Imperial Yeomanry show that even they, in company with the rest of the British Army, must submit to the wearing of glasses or fail in the race. The yeoman is extinct.

Our own authorities ask for a lowering of the standards. If these premises be true, how long, one can but ask, ere our proud standard must fall, crushed, with many other good things by the onward march of "civilization"? How soon will the "glazing" of our iron regulars proclaim to the world our national decay? When will our $^{20}/_{20}$ standard be borne by that same westward tide to the vigorous New World which, portend says, will one day take life in the dead East?

ECHOES AND NEWS.

NEW YORK.

New Pest Houses.—Commissioner Lederle is planning five new hospitals to serve for smallpox patients, one for each of the boroughs.

Offers $5,000 to Hospital.—Mrs. John H. Burtis, President of the Board of Managers of the Memorial Hospital for Women and Children, Brooklyn, has told the hospital staff that if it will raise $15,000 to meet the immediate debts of the institution and guarantee to pay the remaining debts, which amount, it is said, to $15,000 more, she will give $5,000 additional to the hospital. Mrs. Burtis announces that she is anxious to retire from the head of the institution, and go abroad for a year's rest and recreation. There has been some difference of opinion among the managers of the Memorial Hospital as to the desirability of maintaining the institution exclusively for women.

Nervous Disease Ward.—The Post-Graduate Medical School and Hospital, Second Avenue and Twentieth Street, received last week a gift of $25,000 from Mrs. Hannah N. L. Sherman, of Lawrence, Long Island. This money is to help support a new ward for women and children afflicted with nervous diseases. The ward is to contain fourteen beds, five of which will be supported in perpetuity by Mrs. Sherman's gift. The sum given is not enough in itself to support an entire ward, but makes it possible to devote one entirely to patients suffering from those particular diseases. It will be the only one in the city. The naming of the new ward has been left to Mrs. Sherman, and she has decided to call it the Hope Ward. The five beds will be called the Lawrence beds.

German Medical Society.—At the next meeting of this society on March 3d, Dr. Willy Meyer will read a paper on "What Can be Diagnosed in Acute Appendicitis." Dr. T. W. Bandler will show a case of "Chorioma Uteri, with Microscopical Demonstrations."

Resolutions on the Death of Dr. Mundé.—"Death has taken our beloved teacher, friend and helper, Dr. Paul F. Mundé, in the fulness of his fame and power. His universal kindness, his never falling courtesy, his generosity, and, above all, his loyalty, rendered him dear to every member of the Mount Sinai Alumni Association. We shall never forget the lessons learned at his hand, and enforced by his precept. We are better physicians and better men for having lived in close contact with him. In the sorrow that we personally feel we extend to the family our sympathy, most heartfelt and sincere, realizing however that it is impossible 'to gild a grief with words.'"

Committee. { SAMUEL M. BRICKNER, M.D.,
ALBERT A. BERG, M.D.,
CHARLES GOODMAN, M.D.,
MARTIN M. WARE, M.D.

Honor to Dr. Charles Rice.—The movement set on foot by the leaders of the pharmaceutical profession to honor by some fitting memorial the memory of Dr. Charles Rice, late of this city, is well under way and should be liberally responded to by physicians throughout the country. The raising of the standard of the pharmaceutical profession and the present high standard set for the preparations of the Pharmacopœia are largely the results of Dr. Rice's activity.

Research Work at the New York University.—The reports of the laboratories of physiology, chemistry, bacteriology, and pathology, in the Medical School, recently made public, are remarkable as indicating a marked increase in the amount of research work performed. Eight monographs on research subjects have been published from the physiological laboratory during the past year, while the pathological laboratory in the same period has the record of 264 autopsies in gross pathology. Two hundred and sixty specimens were prepared for the Pathological Museum, and 600 specimens illustrating various forms of disease were received from the New York Hospital. The clinical laboratory made 2,532 examinations, of which 1,872 were for classes in the dispensary and 610 for the Bellevue Hospital.

Appointment of Dr. Magill.—Dr. William S. Magill has been appointed research assistant in the laboratory of bacteriology of the University and Bellevue Medical College. Research for the present year in this laboratory will be made in the etiology of smallpox and the chemical products of milk bacteria.

Pneumonia Very Prevalent in New York City.—There has been an unusual increase in the number of deaths from pneumonia and other diseases of the respiratory organs in the last four weeks. During the week ending February 15th, according to the Health Department, there were 334 such deaths, and in the following week, ending February 22d there were 353. In the corresponding week last year there were only 243 such deaths. The increase is said to be due to the epidemic of measles, as cases of that disease frequently develop pneumonia.

Buffalo and the Social Evil.—After a conference between representatives of the Anti-Saloon League, District Attorney Penney and Superintendent Bull of the Police Department in the District Attorney's office of Buffalo, February 22d, the Anti-Saloon League authorized the issuance of a statement in which it conceded that it was impossible to stamp out the social evil and therefore made a compromise. The statement was issued in the name of the Executive Committee of the Anti-Saloon League, consisting of Byron H. Stauffer, O. P. Gifford and John F. Brant, all ministers; District Attorney Penney and Supt. Bull. It was in part as follows: "We realize that the city of Buffalo, during all the years of her history, has, like all centers of population, been compelled to face the problem of the social

evil, together with the various kinds of vice accompanying this evil. We are not desirous of attempting the impossible task of eradicating these evils, for we believe that in attempting this task we would so scatter the vicious element as to aggravate the condition which we have been attempting to ameliorate. We agree that all thoroughfares shall be free from this element, and that it shall be confined to a definite and limited area not traveled by the general public."

Manhattan Dermatological Society.—A regular meeting of this society was held Friday, February 7, 1902, at the residence of Dr. C. A. Kinch, 273 West Seventieth Street, with Dr. W. S. Gottheil in the chair. Dr. J. Sobel presented a case for diagnosis: the patient presented himself at the clinic and a diagnosis of grippe was made; the body showed a morbilliform eruption; the question of rötheln, erythema multiformis, dermatitis medicamentosa, or a dermatitis complicating grippe was considered by the speakers. Drs. Cox and Kinch believed it to be a case of dermatitis medicamentosa. Dr. Bleiman said that the initial symptoms spoke as well for measles as for grippe and the appearance of the eruption favored the diagnosis of measles. Dr. Gottheil could not positively exclude measles; the presence of eruption before medication excluded dermatitis medicamentosa. Dr. Sobel did not regard it as measles owing to the absence of catarrhal symptoms of involvement of face and of Koplik's spots, but strongly suspected grippe with a complicating dermatitis.

Dr. Gottheil presented a case of folliculitis decalvans in a woman about forty years of age. He said that it was unusual for it to attack the scalp alone, and he considered this case as a non-parasitic sycosis. Dr. Sobel spoke of the treatment as it applies to children; Dr. Cox discussed the treatment of adult cases and spoke highly of balsam of Peru. Dr. Abrahams said that acute suppurative folliculitis of the scalp was rare in adults, but common in children. Dr. Bleiman spoke of the similarity of this disease to sycosis barbæ and advised complete epilation and antiparasiticides.

Dr. Gottheil presented a girl of twelve years with two distinct eruptions; one consisted of oval scaly patches upon a hyperemic surface seen on the chest and left iliac region; there was also some scaling on the scalp; this he regarded as a psoriasis; the second was a dark mottled eruption (pigmentation), macular, seen on the back and abdomen, which had been present for two years; the origin was unknown; there was no history of a previous eruption. Dr. Sobel thought the pigmentation of second eruption might be due to maculæ cœrulæ. Dr. Oberndorfer regarded the first as a psoriasis in an unusual location and the second as probably due to arsenical treatment for a previous acute or chronic condition. Drs. Cox, Kinch and Abrahams believed a previous eruption had in the process of healing left this discoloration; the first eruption was regarded as psoriasis.

Dr. Bleiman presented a case for diagnosis: a woman twenty-one years of age, married; eruption present since birth; face is red and hyperemic; the entire body shows scaling to a marked degree; on the feet and lower limbs the epiderm can be peeled off in large patches, leaving a slightly hyperemic base; the skin is thick and dull; patient gave birth to an 8½-months fetus similarly affected; it lived fourteen days. Presented with a probable diagnosis of dermatitis exfoliativa. Drs. Oberndorfer and Abrahams called it a marked case of ichthyosis. Dr. Sobel was not willing to call it dermatitis exfoliativa, but did not classify it as an ichthyosis. Dr. Franklin thought it was dermatitis exfoliativa. Dr. Gottheil spoke against such a diagnosis; he believed it to be ichthyosis. Dr. Bleiman further stated that the history and well-being of the patient did not correspond with the picture of dermatitis exfoliatus, yet he looked upon the case as interesting from a diagnostic point of view. If it was ichthyosis it surely was a very unusual case.

Dr. Abrahams presented a case of mild ichthyosis; the eruption at one time covered the entire body; at present it is seen in patches at various points of the body; the eruption was not observed until after an attack of measles five years ago (boy is now eleven). Dr. Abrahams presented a case of non-congenital ichthyosis, believing measles to be the causative factor. Drs. Cox and Sobel believed all cases to be congenital; the early manifestations are slight and are readily overlooked. Drs. Oberndorfer and Bleiman called it a mild case; in some places it resembles keratosis follicularis. Dr. Gottheil believed both conditions to be present; pathologically both conditions are closely allied; he does not look upon the acute exanthemata as etiological factors.

Dr. Abrahams presented a case of inguinal tertiary bubo (bilaterial). At first the left side was affected, then the right became involved; the buboes attained the size of an orange and were uninfluenced by any teratment until antisyphilitic medication was inaugurated. There was no history of gonorrhea, chancre, or wound; the abdominal and thoracic organs were normal. The patient began to improve only when placed on mercury and the iodides. He regarded this as a rare affection, yet felt tempted to make such a diagnosis owing to its rapid improvement under antisyphilitic treatment, other methods failing. Dr. Gottheil said that unilateral gumma (inguinal) was rare and double gumma extremely so; he considered the source of infection to be the urethra; its response to mercury and the iodides does not necessarily stamp it as specific. Dr. Bleiman mentioned a case of traumatic bubo, in which syphilis was excluded, which got well under antisyphilitic treatment. Dr. Cox agreed with Dr. Abrahams. Dr. Sobel thought that a urethral chancre with secondary symptoms may have been overlooked by the patient and so he considered the bubo as a secondary glandular involvement.

PHILADELPHIA.

University Can Build Veterinary Hospital.—Residents of the locality near Thirty-ninth Street and Woodland Avenue have objected strenuously to the erection of a veterinary hospital by the University in lieu of the old one torn down at Thirty-sixth Street to make room for the new medical laboratories. It was claimed that the act referring to the erection of hospitals in built-up portions of the city applied, but application to the State for an injunction has been refused by the Attorney-General. No reasons for the decision are given.

Typhoid and Smallpox Decreasing.—New cases of typhoid and smallpox for the week ending February 22d were 83 and 63, as compared with 157 and 74 for the preceding week. The greater number of the new cases of smallpox are coming from the northeastern section of the city, where very many of the mill operatives, a large portion being English persons, refuse to be vaccinated. Fourteen cases occurred at the same time in one block among these people.

Changes in Hospital Staffs.—Dr. George E. de Schweinitz, for several years professor of ophthalmology in the Jefferson Medical College, has been elected to succeed the late Dr. Norris as professor of ophthalmology in the University of Pennsylvania. Dr. S. Weir Mitchell, who has been for thirty years associated with the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases, has resigned as senior physician,

and will serve only as one of the consultants. In this hospital was begun the first distinct clinic for nervous diseases in this country. Dr. John K. Mitchell has been elected to the vacancy caused by his father's withdrawal. Dr. J. Madison Taylor has also resigned his position as assistant physician of the institution. Dr. D. D. Stewart has resigned as professor of diseases of the stomach and intestines at the Philadelphia Polyclinic, and Dr. Joseph Sailer has been elected as his successor.

Officers of Neurological Society.—Officers of the Philadelphia Neurological Society for the ensuing year are: President, Dr. J. K. Mitchell; Vice-Presidents, Drs. F. X. Dercum and Joseph Sailer; Treasurer, Dr. Guy Hinsdale; Secretary, Dr. A. A. Eshner; Councillors, Drs. D. J. McCarthy, W. G. Spiller and W. C. Pickett.

Address by Dr. Roswell Park.—Dr. Roswell Park of Buffalo delivered an address at the University of Pennsylvania, February 19th, under the auspices of the Charles K. Mills Neurological Society. Dr. Park congratulated the students on the excellent instruction they are receiving, and stated that for that reason he need not confine his remarks to a strictly medical subject. He therefore spoke on "Student Life in the Middle Ages," depicting the manners, customs, and life of the early university students. Their requirements and disadvantages were compared with the present fortunes of students, many incidents illustrative of the life of those times being given. The origin of the customs of dueling, hazing, and fagging were described. After the address a reception to Dr. Park was given at the Roosevelt.

Philadelphia's Water Filtration.—At the meeting of the North Branch of the County Medical Society, held February 20th, Mr. John W. Hill, the engineer in charge of the construction of the Filtration Plant of Philadelphia, read a paper entitled "The Results of a Year's Experimentation with the Filtration of Philadelphia's Water." The author referred to the pecuniary loss resulting to the city from an epidemic of typhoid, and stated that during a year when only a moderate number of cases of this disease were observed the loss would far exceed what it would cost the city to build a filtration plant. Various instances were cited in which the reduction of this disease has exceeded eighty per cent. in the cities which have established filtration plants, since they were put in operation. The various kinds of filters that have been in operation were described and it was stated that the best results have been obtained by first passing the water through a roughing filter, or preliminary filter, constructed of broken stone or slag, varying in size from ¼ to 1½ inches. By this method the final filters can be run at a rate about twice as great, and the expense of cleaning the sand is thus correspondingly reduced. The roughing filters are simply cleaned by flushing, while in the final filters the sand must be taken out, scraped and restored at considerable expense, which is a very great item in favor of the use of the preliminary filter. Numerous tests have been made with different filters by applying waters of different grades of turbidity and containing larger or smaller amounts of bacterial contents, and the reduction in both has almost uniformly been about ninety per cent., in some cases being as high as ninety-seven per cent. Experiments have been made with the waters of both the Delaware and Schuylkill Rivers, the water of the former being the purer. One of the most difficult problems encountered is the removal of the bacillus coli communis. Water containing various amounts of these germs has been tested and, as a rule, there is no evidence of the germ in the filtered water. One difficulty that confronts this work is the fact that during the time when the water in the Delaware River is very low it contains an exceedingly large amount of chlorine, but this is not believed to be sufficient to affect the palatability of the filtrate. Experiments have been made to determine the effect of an elastic mattress covering over the tanks, but this has not seemed to be of any value. One of the principal factors in the successful running of a filter is to keep it at a steady rate. Statistics were given comparing the death-rate of the different cities using filtrated water and those using spring water; in those of the latter class it was shown to be uniformly higher. Dr. James M. Anders opened the discussion and gave an account of the various epidemics of typhoid fever, which have occurred in this and other cities, the majority, if not all, of which he believed could be traced directly to the water-supply. He spoke upon (1) conditions and diseases caused by the use of impure water, and (2) the effect of slow sand filtration as a means of minimizing the prevalence of these diseases. He stated that he believed impure water was responsible for many of the diseases of the alimentary tract, and disturbances of bowels and stomach, in addition to being the direct cause of the outbreak of an epidemic of an infectious disease in many instances; he cited in support of this theory the cholera epidemic of Hamburg in 1892, the epidemic of typhoid in Plymouth, Pa., and various others, many of which, in his opinion, could have been avoided had the cities been supplied with filtrated water.

Dr. D. H. Bergey who has had considerable experience in filtration work, stated that he believed the introduction of filtrated water into Philadelphia would be followed by a very marked decrease in typhoid fever and the kindred diseases. Dr. Samuel Wolfe referred to the fact that the impure water furnished the population of the city at the present time had been the cause of an enormous consumption of various mineral waters and bottled waters, as well as being in his opinion responsible for a certain amount of the alcoholic beverages consumed.

CHICAGO.

Reforms at Dunning.—The County Commissioners are planning many reforms at the county institutions, which include a reorganization and enlargement of the medical staff, relief of the overcrowded condition of the hospital for the insane, and eventually the erection of a series of cottages to replace the present building.

Annual Meeting of the Chicago Eye, Ear, Nose and Throat College.—The faculty held its meeting February 10th. The following were named as Board of Directors for the ensuing year: Drs. William A. Fisher, President; A. G. Whippern, Vice-President; John E. Hoffman, Secretary; Thomas Faith, and H. W. Woodruff.

Alumni Week.—The faculty of the Northwestern University Medical School has set aside the week of June 16th as alumni week. There will be general and special clinics of all kinds, private operations, ward visits, ward walks; men of international reputation will hold clinics at Mercy and Wesley Hospitals, and the alumni will be given special opportunity to see and study cases. It will be a week of concentrated postgraduate work.

Smallpox not Feared.—Having successfully set in motion the agencies for the suppression of smallpox in the territory surrounding Chicago, the Health Commissioner, Dr. Reynolds, refers in this week's bulletin to certain other affections of far more importance as causes of the city's mortality. Scarlet fever, for example, had 924 victims during the last three years in this city, while there have been in the same time only

7 deaths from smallpox. The same is true in regard to influenza and pneumonia, both infectious diseases, and as such legitimate subjects of study. Within the last dozen years influenza has taken a place, if not as one of the principal causes of death in itself, at least as leading to mischievous complications, notably pneumonia, the deaths from which in Chicago have increased more than 50 per cent. since the influenza epidemic which began in the fall of 1889.

Consumption is in Check.—Consumption is being dealt with by a number of agencies and there is little left to learn, but much to do in the practical application of existing knowledge acquired by thousands of investigators. It is substantially in check, if not yet materially diminishing. On the other hand, cancer is increasing with frightful rapidity. In the decade ended in 1870 there were only 7.3 cancer deaths in every 1,000 deaths from all causes in Chicago. In the decade ending in 1900, there were 28.9 such deaths in every 1,000, an increase in thirty years of more than 80 per cent. Last year there were 1,003 deaths from this disease in a total of 24,406 deaths from all causes, a proportion of more than 41 in every 1,000, instead of the 7.3 in the decade of 1870, of the 14.5 in that of 1880, of the 19.8 in that of 1890, and of the 28.9 in that of 1900.

Some Defects of Speech of Peripheral Origin.—Dr. William L. Ballinger read a paper on this subject before a meeting of the Chicago Medical Society, held February 19th. The etiology was presented under the following subdivisions: (1) Nasal conditions which cause defects of speech. The various pathologic lesions were such as produced nasal stenosis and consequent deadness or flatness of tone. The nasal resonance is impaired and the timber of the voice is marred. (2) Nasopharyngeal and faucial conditions, which cause defects of speech. These are chiefly adenoids, hypertrophied tonsils, adhesions of the faucial pillars to the tonsils, paralysis of the palatine muscles, cleft of the soft palate, etc. Here some of the muscles concerned in speech are interfered with, and the speech defect may be more marked than in the nasal conditions. If any of these lesions exist prior to the acquirement of language (say, before the fifth year), there are apt to be serious consequences to the further development of the mental as well as the speaking faculties of the child. Slight impediments to speech at this age are much more serious than the same impediments at a later period of development. The child has difficulty in articulation, of which he is made conscious by those with whom he associates. He becomes sensitive and morbid, seeks seclusion, and the speech centers and the other centers of intelligence lie dormant. He is liable to become an incorrigible or "backward" child. Training and the removal of the lesions causing the impediment will often result in astonishing improvement in speech and mental growth as well. (3) Lingual conditions which cause defect of speech. Adhesions of the faucial pillars to the base of the tongue; congenital shortness of the geniohypoglossus muscle; tongue-tie; hypertrophy of the tongue, etc., were given as etiological factors in defects of speech. (4) Laryngeal conditons which cause defects of speech. It was shown that if the different forms of laryngitis and neoplasms were excluded, there were few defects of speech of laryngeal origin. He referred to a want of coördination between the uplifting muscles of the larynx and the down-pulling muscles as causing a sibilant or falsetto voice. Especial emphasis was laid upon the interdependence of the development of the faculty of speech and the cerebral centers of intelligence. The muscular exercise of the organs of speech seems to have a marked favorable influence upon mental development; hence the great importance of early training and surgical correction of the peripheral lesions of the nose, nasopharynx, fauces, and larynx, diaphragm and chest. Attention given thus early would, in many instances, convert a backward child into one of usefulness and intelligence. (5) The lack of rhythm and control of the respiratory movements of the diaphragm were referred to as causing stammering. This condition is usually associated with a tuberculous condition of the patient, or with a family history of this disease.

Management of the Umbilical Cord.—Dr. C. S. Bacon read a paper on this subject. Nature's plan of removing the cord from the new-born child is by suppuration and inflammation. The method in common use is but little better than the primitive method of Nature. Careful study of the dangers that attend the methods of separating the cord and postmortem examinations of babies dying from two to four weeks after birth show that local inflammation of the navel and infection of the umbilical cord vessels are very common. Contrary to the common view navel cord separation is one of the most serious dangers that menace the new-born. Management of the navel according to surgical principles is possible and should be attempted. The cord may be severed close to the body or from two to three centimeters away from it. When a stump is left, antiseptic treatment is necessary. When amputation is done, asepsis should be striven for. In the first case alcohol is the safest and best antiseptic. It should be applied freely, especially at the junction of the cord and skin, before and after the daily bath. When the cord is tied at the junction of the skin and cord an effort should be made to keep the navel aseptic, therefore no bath should be given. The best plan is to cut the Wharton jelly at the base of the cord and strip it back like a cuff and tie the vessels with fine silk or catgut. Then the navel must be kept perfectly sterile. This can only be done by a physician who has some surgical experience.

Surgery of the Prostate Gland.—Dr. J. B. Murphy read a paper on this subject. The prostate is situated behind the triangular ligament and is in close contact with the rectum. The prostatic urethra occupies its second anterior fifth, being completely surrounded by it. It is possible to remove, therefore, only the lateral and posterior lobes of an enlarged gland and retain the urethra intact. The enlarged prostate, differing anatomically from the normal gland, encapsulates the neck of the bladder and protrudes into its cavity. Around the neck of the bladder, just above the urethra, is the internal sphincter, the tonic contraction of which, with the elasticity of the parts, prevents the escape of urine (Howell). The external sphincter of Henle, in the lower part of the prostate, may, also, aid. The prostate may be completely removed without loss of urinary control. The secretion of the prostate is necessary for fertilization, as it is essential to the motility of the spermatozoa. Practically nothing is known as to the cause of prostatic enlargement. Bangs says it begins before the fiftieth year. It is rare in the negro (Schultz). Benign enlargements of the prostate resemble, histologically, fibromyomata of the uterus. The enlargements may be incapsulated, but usually they are not. The growths may be subcapsular, intramural or submucous; usually they are intramural in the lateral lobes and submucous in the middle.

Indications for Prostatectomy.—(1) Pathologic enlargement, with urinary retention; (2) painful and frequent urination; (3) catheter life; (4) secondary cystitis; (5) pressure on the rectum. Suprapubic prostatecomy was first performed by Dr. Belfield, of Chicago, notwithstanding many statements to the contrary, and he deserves the honor of having first deliberately planned and executed this operation. The suprapubic

is the route which Dr. Murphy followed during ten years' service at the Alexian Brothers' Hospital. In this hospital enucleation or cauterization into the prostate or cauterization of the bladder folds was accomplished through a suprapubic opening. Proust describes a subtotal prostatectomy with subsequent suture of the pedicles. Dr. Guiteras collected 153 prostatectomies by various methods, of which 72.3 per cent. recovered, 11.2 per cent. were failures and 16.4 per cent. died. He concluded that the cures in this operation were better and more permanent than those following prostatotomy, though the mortality was greater than after the Bottini operation. In enucleating the lobes, Dr. Murphy uses sharp hooks after the capsule is opened to draw the prostate into the field and retain it there, and to invert the prostate while it is being detached from the bladder-wall from above downward. The anterior wall or isthmus of the prostate is never removed, as it never presents any material encroachment on the canal. The hemorrhage by the perineal route is much less than by the suprapubic. Up to the present time he has operated on 8 cases by the perineal route, employing the following technic: (1) Semilunar incision from ramus to ramus, convexity forward, down to capsule of prostate. (2) Prostate freed from its attachments to rectum by careful dissection. (3) Incision of capsule and shelling out of enlarged lateral lobe by blunt dissection from behind forward, using the sharp hook retractors to draw the mass out as rapidly as it is loosened from its capsular attachment. (4) Division of gland at junction of lateral lobe with isthmus, thus retaining anterior walls of urethra. (5) Same technic on other lateral lobe. (6) Removal of middle lobe if necessary, with the posterior urethra. (7) Permanent catheter, which is allowed to remain in place from eight to fourteen days. (8) Perineal drainage of bladder through tube, with gauze packing in perineal wound; these to be removed in from three to ten days. The difficulty of prostatectomy is in inverse ratio to its size. All of the eight cases have recovered and all have urinary control. All are relieved of retention symptoms and have dispensed with the catheters.

CANADA.

Hospital Donation.—G. B. Burland, Esq., of Montreal, has offered to be one of ten to subscribe $200,000 for a new building for the Montreal General Hospital of 100 beds.

Death of Dr. R. M. Bucke.—On the night of February 20th, Dr. Richard Maurice Bucke, Superintendent of the London Insane Asylum, accidentally slipped on some ice on the veranda of his residence, instant death resulting. Dr. Bucke was born in 1837 in England and was educated at McGill University where he graduated in medicine in 1862, gold medalist in his class. In 1877 he was appointed Superintendent of the London Asylum, which position he held up to the time of his unfortunate death. He was an eminent alienist and a lifelong friend and literary executor of Walt Whitman. Dr. T. A. McCollum, for twenty years a leading surgeon in the Niagara peninsula, has been appointed his successor.

Hospitals of Ontario Form an Association.—Representatives from the leading hospitals of Ontario met in Toronto during the past week and formed an association. For the past few years the funds of most of the hospitals throughout the Province have been falling off, owing in part to the fact that the Government had cut down the annual grant of 30 cents per patient *per diem*. An effort will be made to get the Government to increase the grant to 25 cents; and steps will also be taken to secure a proper measure of county and civic aid. A further feature of the new organization will be power to conduct provincial examinations for nurses' diplomas. The Association will meet annually in Toronto at the time the local legislature is sitting. Dr. John Ferguson, of the Toronto Western Hospital, was elected secretary and treasurer.

Appointments to the Free Consumptive Hospital at Muskoka.—At the last meeting of the Executive of the National Sanitarium Association, in view of the early opening of the Free Consumption Hospital in Muskoka and the establishment of a third institution near Toronto, the following twenty-five practitioners of Toronto were appointed on the visiting staff of the Association: Drs. W. B. Geikie, H. J. Hamilton, Gilbert Gordon, C. J. O. Hastings, W. T. Stuart, Allen Baines, J. T. Fotheringham, George A. Bingham, C. M. Foster, B. Z. Milner, F. N. G. Starr, William Oldright, T. F. MacMahon, A. McPhedran, W. B. Thistle, R. J. Dwyer, G. A. Peters, Graham Chambers, Andrew Gordon, Charles O'Reilly, D. W. McPherson, R. A. Stevenson, John Caven, A. J. McKenzie, and H. B. Anderson.

Toronto University Medical Building.—The Medical Faculty of Toronto University has decided to adopt the suggestions of the Honorable the Minister of Education with regard to the financing of the proposed new medical building. The Trustees of the University will advance the necessary $125,000 and the Medical Faculty will pay four per cent. annually on that sum. This arrangement will render any assistance from the Ontario Government unnecessary and will leave the Medical Faculty free to rent a portion of the building to the Arts Faculty or not as they see fit. It is understood that the proposition will be sanctioned by the Government.

McGill University.—The number of students in attendance at lectures this session in all the faculties reaches 1,114, as follows: Law, 60; medicine, 490; applied science, 254; arts, 294; veterinary science, 16. The University has been the recipient of large gfts during the past year. Those particularly concerning the Medical Faculty are as follows: By Sir William Macdonald, $60,000 to endow the chair of chemistry; $50,000 to endow the chair of botany; $20,000 to supplement the endowment of the chairs of physics bearing his name; $30,000 for storage batteries; the new medical buildings donated by the Honorable Mrs. Howard and Lady Strathcona. The revenue of the University during the past year inclusive of cash on hand, amounted to $393,552.90 and the expenditures, $341,756.97.

Annual Meeting Montreal General Hospital.—The annual meeting of the Governors of the Western Hospital, Montreal, was held during the past week. The retiring officers and staff were all reëlected. The only election was that for the position of assistant laryngologist, Dr. George K. Grimmer being the successful candidate. Dr. F. G. Finley, the Secretary, read the annual report. It stated that the ordinary income for the eight months ending December 31, 1901, was $50,183, and the expenditures $60,287. The medical report showed that the number of patients treated in the same time to a conclusion was 1,919. Of these 154 remained over from the previous year; 168 remained in the hospital at the end of 1901, and 1,933 new patients were admitted. There were discharged during the year 2,573 patients, and there died in the hospital 148. The death rate was 7.7 per cent. as compared with 8.5 for the preceding year. The average cost per patient *per diem* was $1.43. In the outdoor department there were 20,189 consultations.

GENERAL.

Phenacetin Patent Upheld.—On February 5th was brought to a termination an interesting case involving

the patent rights to manufacture phenacetin that has been in the courts for over ten years. The original importers, the Farbenfabriken of Elberfeld, have won the suit.

Retirement of Dr. Kinyoun.—Dr. J. J. Kinyoun, for the past year commanding officer and chief surgeon of the United States Marine Hospital at Detroit, and one of the ablest bacteriologists and most valued plague experts in the United States government service, has just sent in his resignation to the Surgeon-General at Washington, to go into effect May 1st. Dr. Kinyoun has been in the United States Hospital Service for about fifteen years, and during that time has been sent all over the world for the purpose of germ study. Dr. E. K. Sprague has been appointed to succeed Dr. Kinyoun as surgeon in charge of the Marine Hospital, and Dr. Herbert J. Higgs has resumed duties at the post-office branch.

Medical Society of City Hospital Alumni of St. Louis.—At the last regular meeting, held February 20, 1902, Dr. H. L. Nietert read a paper on "Penetrating Stab-Wound of the Heart, with Presentation of Patient." Dr. Frank Winter read a paper, entitled "Some Observations of Gunshot Wounds in the Philippine Islands." Dr. G. Hurd, through the Secretary, presented a paper on "Life."

St. Louis Medical Society of Missouri.—At the last regular meeting of this Society, held February 22d, Dr. C. H. Hughes read a paper on "The Neuropathological Aspects and Neurotherapy of Marasmus Infantilis."

In view of the existing epidemic of smallpox, and the general interest manifested therein, the evening of Saturday, March 1st, will be devoted to the consideration of this subject. Dr. W. T. Corlett, of Cleveland, and Dr. A. W. Brayton, of Indianapolis will take part in the discussion.

Gregory Testimonial Banquet in St. Louis.—The date of the testimonial banquet to Dr. Gregory has been set for Thursday evening, April 17th. A committee on invitations has been appointed which is certainly unique in that it is composed of one member of every class taught by Dr. Gregory, 50 in all. The banquet will be held at the Planters' Hotel and will doubtless be one of the largest and most impressive affairs of the kind ever held.

Harvard Medical School.—According to a statement issued February 20th by Dr. Warren and Dr. Bowditch of the Harvard Faculty, but $294,000 remains to be raised out of the sum stipulated by John D. Rockefeller as necessary before his gift of $1,000,000 towards the endowment of the Harvard Medical School would go into effect. At the time Mr. Rockefeller made his conditional gift to the University, $765,000 in addition was needed to complete the amount required to carry out all the plans of the University in connection with the Medical School. Mr. J. Pierpont Morgan is one of those who have contributed largely to the school, having agreed to give $1,000,000 without conditions.

Obituary.—Dr. Levi Cooper Lane is dead in San Francisco. He was a surgeon and founder of the Cooper Medical College and the Lane Hospital..

Dr. Louis Lewis, of Philadelphia, died in St. Vincent's Hospital, New York, February 20th, after an operation. He was born in England sixty-three years ago and came to this country in 1883, settling in Philadelphia. He was a graduate of the Royal College of Surgeons, and of the University of London. He was also a fellow in the Surgeons' Society of the Royal College of Surgeons, and a member of the British Chemical Association. Dr. Lewis served for a short time as surgeon in the British army. He was editor of the "Medical World," the "Medical Council," and the "Medical Times and Register."

Dr. Edward K. Bacon, one of the most esteemed of the younger members of the Detroit medical profession, died last week at his home. His death resulted from pneumonia. Dr. Bacon was born in Ypsilanti, Mich., where he received his early education. He matriculated in the Michigan Medical College of Medicine with high years and attained prominence among his colleagues. honors. He had practised in Detroit for the last seven His widow survives him.

CORRESPONDENCE.

TRANSACTIONS OF FOREIGN SOCIETIES.

French.

CAUTERIZATION OF THE EYE INSTEAD OF ENUCLEATION—THE INFLUENCE OF HEREDITY AND DEGENERACY IN OBSTETRICS—APPENDICITIS AND GENERAL INFECTION—EARLY DIAGNOSIS OF TYPHOID FEVER—THE ANTERIOR COMMISSURE OF THE SPINAL CORD—HORSE SERUM AND INFECTION—THE FORMATION OF RED BLOOD-CELLS—GELATIN AND THE BLOOD—HIGH FREQUENCY CURRENTS AND THEIR DIRECT APPLICATION TO ANIMALS—THE FORMATION OF THE EYE—PHLEBITIS OF THE SUPERIOR MESENTERIC VEIN—GENERAL TELANGIECTASIS AND CASTRATION.

Many valuable papers were read before the French Societies at the close of the year. The chief are the following:

Vallin, at the Academy of Medicine, December 31, 1901, presented in the name of Panas and of Dianoux a communication on a new method of operating on the eye, with the following chief points: Enucleation of the eyeball, especially in children, is a deplorable intervention because of the deformity which results from it and which, as age advances, tends to grow greater. With the exception of malignant tumors and traumatic infectious inflammation of the eyeball, it would be better to employ the method described by these authors. The following is the technic. Upon the cornea, without opening the anterior chamber, a ring, perhaps two millimeters in diameter, is made with the cautery at dull red heart. After this has been completed the disk so marked out is scooped away and the cornea is perforated at the center by rapidly increasing the heat of the instrument. Thus the contents of the anterior chamber are evacuated. The wound is then sprinkled with bismuth powder and the eye is kept protected by a compression bandage for three days. At the end of this time the surface of the wound is washed with hot water and between the lids a few drops of cocaine and eserine in the form of a collyrium are used. This treatment is continued until the wound is entirely healed. After this is an accomplished fact and all irritation is gone, the final result of the operation is brought about by massage.

Larger reported two cases showing the influence of heredity and degeneracy in the field of obstetrics. The first was that of a young woman who had had one normal childbirth, but during the second was seized with numerous manifestations of hysteria. The child born at this time presented many of the same characteristics. In the second case the mother had had three perfectly normal deliveries, and during the siege of Paris had become again pregnant. The boy brought into the world at this time presented by the face with prolapse of one arm and showed several signs of degeneracy. These cases and similar ones reported by other authors seem to show, according to Larger, the mechanical theories really admitted in obstetrics and

to disprove notably the inaccuracy of the law called the law of Pajot, or the law of accommodation.

SIMONIN, at the Medical Society of the Hospitals, December 27, 1901, presented a series of eighteen cases of general infections, severe scarlet fever, erysipelas, mumps, and infectious angina, in which were observed positive signs of inflammation of the appendix. According to the author this organ may be considered as a kind of tubular ganglion, which takes part during the course of general infection in the defense of the economy and receives the germs by the circulation of the blood as well as of the lymph. The first degree of inflammation of this organ, which might be called appendical folliculitis or adenitis, is shown by pain at the point of McBurney. This is also called latent catarrhal appendicitis. The second grade presents a peri-adenitis, that is to say, an inflammation of the cellular tissue around the appendix. The inflammatory reaction may propagate this as far as the mucosa and the peritoneum. Then follows a crisis or a colic of the appendix more or less acute, with distinct pain, nausea, vomiting and signs of peritonitis. Finally, an appendicitis with abscess may develop after perforation has occurred. The streptococcus is certainly the most frequent agent. Most of these appendicites arise from this germ. It is this same germ which is present ordinarily in angina, erysipelas, scarlatina, grip, measles, smallpox, and it may be the initial agent of infection or associated with some other. Certain authors consider sclerosis of the appendix with obstruction, which one sees so often at autopsies, the result of several attacks of inflammation, latent, subacute or acute, which have occurred during infectious diseases. Such infectious diseases commonly occur during childhood. This is a clinical fact which appears to substantiate the above theory.

J. GOURMONT read a paper on the early diagnosis of typhoid fever by finding the bacillus of this disease in the blood. He states that its presence is constant in those ill with this disease, whether it be of mild or severe degree. The bacillus appears in the blood usually very early, about the fifth day, and continues to be present up to the seventh week. In the prolonged cases with relapses it may be found at a still later period, but this fact is not by any means constant. The germs found in the blood in this observation present all the classic characters of the bacillus of Eberth, excepting that there is very little tendency to agglutinate. The presence of the bacillus of typhoid fever in patients with the disease has no relation with the serum reaction. This may be very slight and yet the germ be present in the blood as early as the fifth day. This fact seems to present a means of dagnosing the disease very early when the reaction of Widal is uncertain or absent.

R. PETIT read a paper on the utility of blood-serum from the horse for preventing infection of wounds. His foundation is both experimental and clinical and indicates that the serum of the horse heated to 55° C. exercises a stimulating action on the phagocytes, advantage of which can be taken to prevent infection in wounds and to hasten their healing. The serum has been used in three cases of laparotomy in man. He employs a dose of ten cubic centimeters which he injects into the peritoneal cavity after the operation is over.

LOMBARD at the Academy of Medicine, January 7, 1902, presented in the name of Laffont and himself a communication in which they stated that glycosuria, albuminuria, and hemophilia have for their cause a variation in the cryoscopic property of the blood. This variation is accompanied as a rule by changes in the liver, in the kidneys, and in the small blood-vessels. All these may disappear, according to these authors, if the normal consistence of the blood is produced. The means which appear to him the most active for obtaining this result consist in the administration by mouth of gelatin in water, fifteen grams a day as the total.

H. BORDIER and LECOMTE, at the Academy of Sciences, December 30, 1901, discussed in a paper the action of high frequency currents when applied directly to animals. When such currents are applied directly to man they are usually not accompanied by any sensation, which fact may be explained by assuming that these currents simply pass over the surface of the body without penetrating the deep tissues. Experiments enabled them to confirm this hypothesis. By applying the current directly to animals, rabbits, guinea-pigs and rats, they were able to kill them. If two collars were used, one around the neck and the second around the body, death came a few days after signs of paralysis appeared. If one pole was placed in the animal's mouth and the other in the rectum death occurred in the rabbit in five minutes, in the guinea-pig in seven minutes, and in the rat in forty seconds.

PICQUE, at the Society of Surgery, January 8, 1902, said that Gregoire and himself had had occasion to observe two cases of phlebitis with thrombosis in the superior mesenteric vein followed by gangrene of intestine. This is a rare affection. So far as is known only twelve other cases have been reported. The first case was that of a patient who, after twenty days of diarrhea and three days of constipation, suffered from hemorrhages from the bowel. An exploratory operation was done at which no positive diagnosis was made. The man died and at the autopsy a phlebitis with thrombosis of the superior mesenteric vein and extensive gangrene of the intestine were found. The second patient was admitted under the diagnosis of volvulus of the intestine. At the laparotomy it was possible to make out large areas of gangrene in the intestine, without, however, the least degree of volvulus. At the autopsy he found a condition of affairs similar to that which existed in the other case. Quénu in discussing this paper said he felt that the authors were wrong in part of their contention, namely, as to the priority of the lesions. They claimed that the disease of the vein preceded that of the intestines, whereas in his opinion it was probable that the thrombosis and phlebitis of the vein were due to the invasion of it by some bacteria which had previously been the cause of the diarrhea, constipation and bleeding. These were certainly cases in which the absence of a bacteriological examination was to be regretted.

TETANUS AND CARBOLIC ACID.

To the Editor of the MEDICAL NEWS:

DEAR SIR: The following patient with tetanus was treated by repeated subcutaneous injections of a one-half-per-cent. watery solution of carbolic acid and recovered.

A girl, aged thirteen years, presented herself for treatment at my office last July with the following history: Seven days previous while playing in a barnyard she had fallen upon a barbed wire fence, severely lacerating her right hand. Physical examination revealed only three points of interest, viz., a cicatrix at the seat of the injury (palmar surface of the right hand), a slight stiffening of the masseter muscles, and a spasm of the flexor group of the right forearm. The child complained of difficult deglutition and of slight drowsiness.

Considering the nature of the injury it was thought best to freely incise the parts. This was done and the

wound thoroughly irrigated with a solution of hydrogen peroxide three per cent. and lightly packed. On the following day the patient presented clearly-defined symptoms of tetanus. There were generalized spasmodic contractions. The skin was hypersensitive and the reflexes were greatly increased. The jaws were nearly set and the eyes were very sensitive to light. The right hand was markedly flexed. Deglutition was difficult. Micturition and defecation were normal. The temperature was normal and the mind clear.

The child was put to bed in a dark room, kept quiet, given a laxative and a dose of bromide. The wound was irrigated with a three-per-cent. solution of H_2O_2, and a number of hypodermatic injections of a one-half-per-cent. watery solution of carbolic acid were then made in a circle around the wound. In all thirty minims were injected.

The next day the symptoms were more intense. The treatment continued the same; the injections were made more frequently, however, thirty minims being injected every three hours.

On July 25th the child showed signs of improvement. The jaw muscles were somewhat relaxed and the right hand could be extended by passive motion. On the following day there were signs of systemic poisoning from carbolic acid. The injections were therefore reduced in frequency to one *per diem*. On the 27th the spasms were aggravated, the jaws were more tightly set and the right forearm and hand rigidly flexed. The injections were again administered more frequently, three times a day. These were followed by a gradual relaxation of the muscles, and from July 27th until the middle of August there was improvement until August 19th, when the child was able to walk to my office. The injections were gradually diminished until but one was given every second day. The bromides were administered daily.

KENNETH E. KELLOGG.

New Britain, Conn., Jan. 13, 1902.

SOCIETY PROCEEDINGS.

NEW YORK STATE MEDICAL ASSOCIATION—NEW YORK COUNTY BRANCH.

Stated Meeting, Held January 20, 1902.

The President, Parker Syms, M.D., in the Chair.

Primary Sarcoma of Pancreas.—Dr. Edward Schnaper presented specimens from two cases of primary sarcoma of the pancreas. This pathological condition is extremely rare, very few being reported in medical literature. In one of the cases no diabetes and no tendency to glycosuria had been found, though for months most of the pancreatic tissue had been infiltrated by the sarcomatous neoplasm.

SYMPOSIUM ON DIABETES.

The principal scientific business of the evening consisted of a series of papers on diabetes, the first of which, on the etiology and pathology of diabetes, was read by Dr. Charles F. Nammack.

Alimentary Glycosuria.—Dr. Nammack said that alimentary glycosuria is probably much more common than is usually thought. Small amounts of sugar in the urine should be looked for very carefully. A number of drugs produce glycosuria—Ether, when taken by inhalation, amyl nitrite, mercury, hydrocyanic acid, sulphuric acid, alcohol, strychnine, glycerin and nitrobenzol; alcohol is an especially frequent cause of glycosuria. The combination of chronic gastritis, chronic alcoholism and chronic hepatitis, furnishes the largest number of cases of non-diabetic glycosuria. Traumatic glycosuria is met with particularly in injuries of the nervous system. Portal thrombosis, acute yellow atrophy of the liver, and perhaps phosphorus-poisoning will also set up glycosuria. Most of these cases can be distingurshed, however, from true diabetes mellitus without difficulty.

Composite Diabetes.—Dr. F. W. Pavy differentiates two classes of diabetes—alimentary and composite. In composite diabetes there is not only defective carbohydrate assimilation, but also abnormal tissue disintegration and the presence of degradation products. These products appear in the urine as beta-oxybutyric acid, diacetic acid and acetone, indicated by the appearance of a red wine color on the addition of ferric chloride. True diabetes mellitus is increasing in New York. This is probably due to the more strenuous life of the present generation; the bustle of present-day existence is hurrying one on to premature decay of tissue. Of 202 deaths from diabetes in New York (Manhattan and The Bronx only) in 1899, 51 were in patients of Irish extraction, 54 among Jews. One compiler of statistics claims that this greater incidence of diabetes among these two classes of people is due to persistent breeding in and in. To Dr. Nammack it seems that this special frequency of diabetes is due rather to the struggling earnestness of both people; heredity does play an important rôle, however. Those occupations furnish most diabetes which involve continued and excessive mental application. The excessive use of tobacco may have a like result. Emotional stresses when intense or protracted also have a marked influence. The association of insanity with diabetes is so marked as to be more than a mere coincidence. The connection between gout and glycosuria is so intimate that they may be almost considered as convertible conditions, the symptoms of one often distinctly alternating with those of the other. Obesity and diabetes also have close relations; usually this lipogenous diabetes, or diabetogencus obesity yields to treatment, but later on the composite form of diabetes may develop.

The Pancreas and Diabetes.—There is some close relation between certain cases of diabetes and lesions of the pancreas; somehow, however, extensive lesions of the pancreas may occur without diabetes and sometimes diabetic patients have normal pancreases. It is not the loss of the pancreatic juice which produces diabetes; the diversion of this through a fistula is possible without glycosuria. The theory is that there is an internal secretion from the pancreas which has a glycolytic property. Changes in the liver have also been noted in diabetes, but the pathogenesis of the disease is not understood.

Suppuration in Diabetes.—Dr. Arpad Gerster, in discussing the surgical aspects of diabetes, said that it is probable that the reason for the frequent growth of pyogenic micro-organisms, especially the staphylococcus and streptococcus in the tissues of diabetics, was due to the fact that these micro-organisms grow better on a sugared medium. Especially is this true if about the percentage of sugar is added to the medium that occurs in diabetic blood. This was demonstrated by Fritz Grossman, who also showed that if, in rabbits, glycosuria is produced by means of nitrite of amyl, it is very easy to cause gangrene and various suppurative processes in the animal tissues.

Insidiousness of Diabetes.—Dr. Gerster said that diabetes is an extremely insidious disease; in the beginning of its course, glycosuria is nearly always intermittent. Urinary examination may prove negative and yet diabetes may be present. Usually in these cases, however, careful taking of the history will elicit the fact that polyuria and thirst are sometimes present and

also some of the other symptoms of diabetes. At times the sugar in the urine disappears during the drain of suppuration upon the system; on the other hand, infectious fevers nearly always stop the glycosuria because of the retrenchment of the diet that occurs as the result of loss of appetite. Dr. Van Noorden said that in seven cases of diabetes that occurred in doctors and pharmacists whose urine had been frequently under examination, without any suspicion of the disease, sugar was found to be intermittently present for a long time before the diabetes absolutely established itself. There is a popular belief that certain peoples' tissues heal easily, while those of others do not heal except after suppuration; it is not improbable that these latter are suffering from latent diabetes. In the old times it was the custom to make a test incision when a grave operation was contemplated, and if this incision through the skin did not heal kindly, the more serious operation was not performed. The possibilities of latency make it clear how necessary it is to examine carefully the urine of all patients who are about to be submitted to a surgical operation.

Frequent Surgical Complications.—The most common surgical complications of diabetes are furunculosis and carbuncle; few diabetics escape these. Carbuncles may, however, occur without a diabetic basis; in fact, in German statistics, of 32 cases of carbuncle, only two patients had sugar in the urine. It is easy to understand how the polyuria, so frequent an accompaniment of diabetes, may cause a dry skin that becomes very easily irritated; the scratching incident to this condition leads to inoculation with pyogenic micro-organisms and hence the furuncles.

Sugar in Sweat.—At times furuncles occur in diabetic patients who sweat very freely. In these cases, however, it will usually be found that there is sugar in the sweat, the presence of which easily leads to irritative conditions. The phimosis which is so common a complication of diabetes is due to the presence of irritating sugar in the urine.

Location and Size of Carbuncles.—The typical place for carbuncles is on the dorsum; they may occur in any locality from the occiput down to the sacrum, but occur most frequently on the face. At times they may reach a very large size. Dr. Gerster has seen one which reached from the occiput to the lumbar region. Diabetic carbuncle of the face must be treated surgically as early as possible, otherwise thrombosis of the emissary veins may lead to intercranial infection; and so to a fatal termination.

Diabetic Gangrene.—The most common form of gangrene is that of the skin and it affects especially the legs. It may begin as a small blister, due to friction, to the application of a vesicant or mustard plaster, to the prick of a hypodermic needle, or to the irritation produced by a truss. It should be treated by the application of moist dressings wet with mild antiseptics. If infection of the gangrenous area takes place extensive ulceration follows and phagedena may set in. The perforated ulcer of diabetics is not different from that of other patients. The gangrene of a whole extremity is not a very unusual occurrence in diabetics. It occurs seven times more frequently in the leg than in the arm. The previous history of the patient usually shows that there has been the intermittent lameness described by Charcot. Attacks of this affection begin with a painful numbness and fatigue of the extremity, while the toes become slightly blue, showing that there is interference with the vasomotors. If in these cases sugar is found in the urine, the occurrence of gangrene sooner or later may be predicted. Gangrene occurs four times more frequently in men than in women. The reason for this is probably that men have more exhausting occupations and so greater degeneration of their arteries than women. At times amputation becomes necessary in diabetic gangrene; about one-half the patients die, many from diabetic coma. In the preantiseptic days, Landouzy said that diabetic gangrene was a *noli me tangere* for surgeons. Jonathan Hutchison counseled high amputation even if only the toes were involved in the gangrene. A middle position between these two opinions is now occupied. The conservative method gives very satisfactory results. The leg is raised and kept perfectly dry, no poultices or moist dressings are used, and the formation of the line of demarcation is waited for; the affected part is allowed to drop off, but no cutting is done unless absolutely unavoidable. If amputation become necessary the point may be selected according to the condition of the limb. If the pulse is good in the popliteal space, amputation may be performed below the knee; if there is any doubt of the pulse here, then go higher. Infection from the gangrenous area must be carefully avoided, so that the amputation should be done at some distance away. The decision is often for high amputation. Dangers of operation are, first, the anesthetic, feared because of the cardiac debility; secondly, the coma, which often follows major operations in diabetic patients. Coma is due to the presence of acid substances in the blood, these being due to a too restricted diet and to the absorption of tissue products during and after the operation. Very restricted diet must be avoided before the operation and the strictest antisepsis and asepsis secured during the operation. The operation should be performed in the morning when the patient is reasonably fresh and not in the afternoon when he is tired and played out from the day's fast. The amount of starch and sugar in the dietary just before and after the operation should be increased even though this increases the glycosuria. Before and after the operation two grams of bicarbonate of soda should be injected, in order to lessen the acidity of the blood. Chloroform and ether have equal dangers. Diabetic coma has occurred after local anesthesia by means of cocaine in an operation for cataract. Its use probably does not lessen the danger. The Esmarch bandage should be avoided and the arteries should be compressed digitally in order to avoid all injuries of the tissues that might lead to a recurrence of the gangrene, long flaps should be avoided and sutures not employed as they favor necrosis of tissue, but short flaps should be made and the wound left open to heal by granulation. Every case of surgical intervention should be preceded by careful examination of the urine of the patient; if there is any doubt of the presence of sugar a test-meal of eight ounces of bread and sweets should be given, when, if glycosuria does not follow, there is no diabetes. The prognosis of surgical operations in diabetes does not depend on the amount of sugar in the urine, even when patients have as high as six per cent. of sugar, the majority of them recover from surgical intervention. The important factor is the acidity of the blood, which induces coma. It is this that shows the decadence of the tissues. The absence of the knee reflexes is said to be a sign of a bad prognosis. In the last ten years thirteen cases of major operations in diabetic patients have occurred at Mt. Sinai Hospital. Five of the patients operated upon died of coma in from three hours to three or four days, directly following the operation. Two other patients died five to six months later. These, of course, have no connection with the operation. As a rule at Mt. Sinai, cutting operations are done only when absolutely necessary; if, for instance, a toe becomes gangrenous and the bones should project beyond the sloughing tissues, the periosteum is pushed

back and the bone is enucleated at the next joint. The expectant treatment is carried out to the fullest extent possible.

Diabetic Affections of the Eyes.—Dr. S. Busby Allen said that every tissue of the eye may be affected by diabetes. It is not surprising to find that the fundus of the eye should suffer in so serious a disturbance of metabolism. When the ophthalmologist looks at the eye-grounds he is really gazing at brain tissue. This is extremely delicate and easily affected. Both internal and external ophthalmoplegia may occur in consequence of complications of diabetes. The occurrence of muscular eye weakness in a patient of thirty-five must always arouse suspicion of diabetes. Even in comparatively early years diabetes may produce changes in the shape of the eyeball or the lens so as seriously to disturb vision. Such changes have been reported in patients under forty. They must be guarded against because the proper treatment of diabetes will lessen the tendency to their occurrence.

Diabetic Cataract.—This is the most characteristic eye lesion produced by diabetes. It is all the more interesting because other serious metabolic diseases do not cause its development. Noyes has said that changes in the lens are not due to inflammation, but are really degenerative in character. It is extremely interesting to consider what poison it is that produces cataractous changes. There is really no difference discoverable between diabetic and ordinary senile cataract. In old patients one cannot be sure whether cataract is due to diabetes or merely to senescence except after careful examination of the urine. In very young people, of course, the occurrence of double cataract or of very rapidly progressive cataract is almost a sure index of diabetes. Recent studies have shown us that amblyopia is especially liable to occur as a consequence of the use of tobacco. It may, however, occur in diabetic patients in the absence of either alcohol or tobacco. It is a true toxic amblyopia, due very probably to the presence of poisonous acids in the blood.

Eye Operations in Diabetes.—As far as possible operations upon the eye in diabetic patients should be done during lulls in the disease; that is, at times when the amount of sugar in the urine is less than usual. Operations for cataract are usually followed by iritis, but this is commonly not serious. It must be remembered that cyclitis in diabetic patients may easily lead to glaucoma, or may interfere with the nutrition of the vitreous or of the cornea. Even slight injuries of the eye should be cared for scrupulously in diabetic patients or they may have very serious consequences. Simple ulcer of the cornea in diabetes, as in nephritis, may readily lead to the loss of an eye.

Prognosis of Diabetes.—Dr. Abraham Mayer said that the prognosis of diabetes depends on a number of factors. The age of the patient is especially important; the younger the patient, the worse the prognosis. The presence of arteriosclerosis in a comparatively young patient with diabetes adds to its seriousness. Traumatic or syphilitic diabetes is of more favorable prognosis than other forms. Old patients in whom the disease has already lasted for a long period are not liable to be seriously inconvenienced by diabetes or to have their lives shortened. The coexistence of obesity is a favorable factor. The so-called uric-acid diathesis is also a favorable condition. Much depends on whether the patient is in such circumstances in life as to make proper diet and hygiene possible. The existence of phthisis in a case is always serious. The presence of nephritis makes the prognosis very grave. Serious organic disease of the pancreas is an index of early fatal termination as a rule. The patient's general condition, the state of the heart and of the digestive tract are also important factors in prognosis. Diabetes may be divided into mild, medium, severe, and very severe forms of this disease and in the first two classes the prognosis is reasonably good as regards life. The standard as to the form of diabetes present in any case is the test whether a patient after a rigid diet is free from glycosuria. If no sugar occurs in the urine, then the case is mild. If, in order to remove the sugar from the urine nitrogenous products in the diet must also be limited, then it is a mediumly severe form of the disease. The severe diabetes gives glycosuria even when no carbohydrates are present in the diet.

Treatment of Diabetes.—The principle upon which the hopeful treatment of diabetes is founded is enunciated by Naunyn. When any weakened function is rested it gets better and stronger, abuse of weakened function on the contrary leads to its further deterioration. A lessened amount of sugar in the dietary, by sparing the metabolic function for sugar increases its power. Hence the dietetics of diabetes become really curative in effect.

Dietary.—The quantity that a diabetic patient may take must be regulated as well as the quality. Many of these patients suffer from overfeeding. Fats and albumin must be the main portion of the food. They suffer most for want of bread. Dr. Mayer has found that walnuts may replace bread. They are taken with evident relish. When there is a tendency to emaciation an abundance of fat must be given. Alcohol aids in the digestion of fats and besides replaces a certain amount of food material by the heat it supplies when burned up in the system. It thus reduces the tendency to phthisis and coma.

Drug Treatment.—Any number of drugs have been recommended, but most of them fortunately have fallen into disuse. Opium remains the most effective drug for the disease. It not only lessens the thirst and hunger and so reduces the sugar, but it also improves the assimilation, allays the nervousness, irritability and tendency to itching. A half grain three times a day may be given at the beginning; cascara should be administered to prevent constipation. Dr. Mayer has found various salts of arsenic very useful but he has not found that combinations of gold and arsenic are better than others. A most effective drug in Dr. Mayer's hands has been the sublimate of mercury. This is given in doses of one-sixteenth of a grain, three times day, in a large glass of water; it is not suitable for every case, but in diabetics of sluggish bowels in whom the bacterial cause seems prominent and the absorption of intestinal toxins an etiological factor, this remedy exerts a very favorable influence.

Insidious Glycosuria.—Dr. Bierwith said in the discussion that it is not an unusual thing to find glycosuria without increase of the quantity of urine passed, or increase in the specific gravity of the urine. In these cases surgical procedures might easily be determined upon without realization of the patient's condition, though, needless to say, they involve serious risks. Treatment of diabetes in order to be successful, must begin early, and for this early discovery of the glycosuria is important. Diabetes as seen in different patients is not always the same disease, but has a different pathological basis and a different etiology in many cases. Dr. Bierwith is not sanguine as to the successful treatment of diabetes.

Suprarenal in Diabetes.—Dr. James J. Walsh called attention to the fact that in recent experiments a direct connection between the secretion of the suprarenal glands and the occurrence of glycosuria seemed to have been found. These experiments are the most interesting recent observations in the patho-

genesis of diabetes. They serve to show how incomplete knowledge of the subject is as yet. With regard to latent diabetes the glycosuria will be discovered if certain suspicious signs are borne in mind. Loss of muscular power, for instance, soreness of the gums, loss of sexual potency, lapses of memory, greater disinclination than usual to work in young subjects, are apt to be the earliest symptoms of diabetes and should arouse suspicion. With regard to the prognosis of the disease the tradition in Germany is that no patient has lived more than two years after the Gerhardt reaction was found positive in the urine.

Possible Contagiousness.—Dr. Walsh said that the occurrence of diabetes in husband and wife is now known to be comparatively so frequent that the possible contagiousness of the disease is a practical point to be borne in mind. It may be that some ferment which finds its way into the circulation is responsible for the splitting of the sugar molecule that renders it unsuitable for nutrition; such a ferment might easily be communicated.

In closing the discussion, Dr. Mayer said that while only one per cent. of the cases of diabetes in thus far published reports occurred in husband and wife, in statistics gathered by himself in which he always asked for a sample of the husband or wife's urine, when the other was affected, he found glycosuria in five to eight per cent. of the cases. He believes diabetes to be contagious and infectious. With regard to the use of bichloride of mercury, European authorities consider that it is in certain cases a helpful method, though they fear the use of so strong a poison in the comparatively large doses recommended. Recent text-books all mention it and there seems no good reason to doubt that in selected cases it is the most effective treatment that there is at present.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON PEDIATRICS.

Stated Meeting, Held January 9, 1902.

Rowland G. Freeman, M.D., Chairman.

Hemitrophic Asymmetry.—Dr. A. Hymanson presented a patient suffering from congenital asymmetry or hemihypertrophy. The child when born weighed about twelve and one-half pounds; the labor was tedious and difficult, but forceps were not used. About six weeks after birth it was noticed that the right arm and leg were larger than the corresponding left limbs; the right thorax and abdomen were also more developed. The expression of the child was somewhat idiotic and the left face was a little more developed than the right. At the back of the head, however, there was distinct bulging of the right side of the head. The skin is soft and smooth on both sides of the body and not roughened as is often the case in hypertrophic conditions. The reflexes are normal. The infant is rather nervous and irritable during the day and is prone to be restless at night. A number of convulsions have been noticed, more noteworthy on the right than on the left. The tongue is distinctly thicker on the right side than on the left and takes part in these convulsions. There does not seem to be any hereditary element in the case. The parents are Russians and have had eleven healthy children. Twelve such cases have been reported in recent literature. As a rule all the tissues are uniformly enlarged—the skin, the muscles and the bones. Medical knowledge with regard to these cases, however, is not very definite. It is evident that theory has had more to do with the explanation of the causes of the condition than actual observation.

Rachitic Asymmetry.—Dr. Dessau said in discussing Dr. Hymanson's case that he had reported a case not long ago in which there was a decided asymmetry, though not very marked. In Dr. Dessau's case rachitis seemed to be the main etiological factor. Careful examination, however, does not seem to reveal any sign of rachitis in this patient and the case seems to be an example of essential congenital hypertrophy.

Spasmus Nutans.—Dr. Charles Hermann presented a patient suffering from the characteristic headshake of this affection. There is no heredity to be traced. The infant was breast-fed for a year and at thirteen months contracted measles, since when there has been the head-nodding. There is, as always in these cases some nystagmus; the movement of the eyes can be especially brought on by having the patient look toward the left; when the patient looks toward the right it ceases. The head-nodding is most noticeable when the nystagmus is most active.

Etiology.—Usually rickets exists as a factor in the etiology of these cases. Not infrequently the spasmus nutans begins after trauma. Sometimes it is due to the fact that the infants develop nystagmus as a result of being kept constantly in a glaring artificial light. In the present case, the method of Dr. Caillé can be employed successfully to prevent the head-nodding. His suggestion is to cover up the eyes for the time being with a bandage. When this is done or when the patient's head turns to the right and there is no nystagmus, the nodding spasm ceases. When the head is held the nystagmus can be seen more plainly. Hence it is always worse when at the breast and when the mother's attention is especially attracted to it. In the other patient a distinct rachitic condition can be found. Though the infant is seventeen and one-half months old, the fontanelles are widely open at a time when they ought to be almost completely closed. Moreover, the rachitic rosary is present on the ribs and the epiphyses of the limbs are larger than normal. Usually phosphorus is the best remedy in these cases. In one case in Dr. Hermann's experience, however, in which all the ordinary rachitic remedies failed, the patient was greatly improved by a sojourn of three weeks in the country.

Phosphorus in Rachitis.—Dr. Louis Fischer said that while it is generally conceded that phosphorus is an excellent antirachitic remedy, a decided reaction against the notion of its usefulness in rachitis is noticeable. Baginsky of Berlin says that, though he has used it to a considerable extent and watched its administration very carefully, he has not found the slightest benefit result from it. Its administration in the ordinary form of phosphorized cod-liver oil is scarcely an index of its usefulness, since the phosphorus in this preparation rapidly disappears.

Benefit of Phosphorus.—Dr. Dessau said that he has used phosphorus largely and has often obtained excellent results. He has commonly not used it alone but as the elixir of phosphorus of the United States Pharmacopœia. Since the introduction of this remedy some fifteen years ago, he has employed it in combination with cod-liver oil; he is not absolutely certain whether it is the cod-liver oil or the phosphorus that produces the good results, but certainly the patients recover more rapidly than before. He wishes it to be distinctly understood that he is a believer in the use of phosphorus for rachitis.

Trauma and Fright in Spasmus Nutans.—Dr. Stokes said that he has had the opportunity to see some six cases of spasmus nutans. In none of them were there any signs of rachitis. In a recent case the nystagmus developed suddenly as the result of an accident. The child was seated on a chair which, by the touch

of a spring, can be converted into a baby carriage; the spring was accidentally touched and the chair suddenly dropped into its lower position, the child was very much frightened, had a series of nervous symptoms and then nystagmus developed with later nodding of the head.

Effect of Heat on Cow's Milk.—Dr. S. H. Dessau read a paper on the use of heat as a modifying agent for the preparation of infant's food. Up to the present time heat has been considered useful for the preparation of baby food, mainly because it destroyed pathogenic germs. It has come to be realized, however, that certain chemical changes are induced in the milk by heat and that these may or may not be of assistance in the digestion of the milk. Fresh milk is a raw product and as such is not as digestible as cooked material. There is a marked contrast between the vomit of the cow's-milk-fed child and one fed on breast milk; the small curds, soft and soluble, of the breast-fed infant are well known. Clinical experience has shown that this is due to the difference in the digestibility of the two milks. The curd of sterile cow's milk is much more like that of breast milk; some chemical change would seem to have been induced in cow's milk that causes it to curdle in a manner more suitable for infant indigestion. Every housekeeper knows that rennet will not curdle boiled milk. It is important, however, not to raise cow's milk to too high a temperature. Sterilization at a high temperature seems to cause chemical changes in the salts of the milk that make them insoluble. As the result of the lack of these salts in the food, the infant is liable to scurvy; the antiscorbutic elements of the food are destroyed. This is true of the phosphates also and so the antirachitic elements in the milk are destroyed. The effect of heat upon food materials and their digestibility has never been sufficiently recognized. Professor Remsen of Johns Hopkins showed that the effect of heat is much more than has been thought, its principal effect being the aid to digestion if the temperature used be not too high. In Dr. Dessau's experience this use of a moderate amount of heat up to about 140° F. is much better than the attempted imitation of mother's milk. This latter is an extremely intricate problem and one that can not be solved readily under ordinary household conditions.

Anaerobic Bacteria in Milk.—Dr. J. Lumley Bell of Englewood, N. J., said that while it is well known that ordinary microbes are destroyed by sterilization, it is not known that anaerobic bacteria are destroyed by any temperature under that of the boiling-point. Very little is known of these micro-organisms, but it is beginning to be realized that they are probably pathogenically active in the intestinal tract much oftener than has been thought. While heat may destroy ordinary germs and so improve the quality of milk and may add to its digestibility by modification of the chemism of the milk, it cannot be of avail in making good baby-food out of poor milk. When microbes have continued to multiply in milk for a number of hours, certain of their soluble toxic products are dissolved in the milk and these, of course, will not be destroyed by heat. During the warm weather when microbes multiply so rapidly it is the presence of these toxins rather than the germs themselves that causes the serious effects upon the infantile digestive tract.

Coagulation by Gastric Juice.—Dr. Max Einhorn said that in his experience boiled milk coagulates as readily when mixed with gastric juice as raw milk. His experiments, of course, were conducted with the stomach-contents of adults, but he knows that the same thing would happen also if the gastric juice of infants were employed. Any dilution of cow's milk causes it to coagulate in a manner much more nearly resembling the curdling process of human milk. Dilution with barley-water suffices for this purpose.

Boiled Milk and Constipation.—Dr. Louis Fischer said that the boiling of milk for infant's food causes an extreme form of constipation. Milk that is only pasteurized has a much more constipating tendency than raw milk. During the last year Dr. Fischer has had a number of children under observation who were being fed on milk that had been sterilized according to the direction of Professor Russell of Wisconsin, the milk being raised to a temperature not above 150° F., which suffices according to Professor Russell's observations in destroying the bacteria in the milk. Even when milk is raised only to this temperature, it still proves somewhat constipating. The ideal in infant-feeding of cow's milk is a milk certainly free from bacterial contents fed at human temperature. There are several dairies in the city now that supply practically sterile milk should be subjected to this temperature for not cubic centimeter may very well be neglected. Milk from grocery-stores, however, often contains several millions of bacteria to the cubic centimeter, and this sort can not be rendered innocuous by boiling.

Heated Milk and Scurvy.—Dr. Rowland G. Freeman said that in the American Pediatric Society investigation of the cause of scurvy among children in this country, it was found that most of the patients had been fed on patent food, very few on sterile milk, so the scorbutic condition was evidently a consequence of unsuitable food rather than of any special change in the food. A certain number of cases of scurvy have been found to occur also in breast-fed children. In Dr. Freeman's experience, heating has no effect on the curdling of milk; boiled milk will coagulate in just as large curds under unfavorable conditions as will raw milk. Dr. Freeman does not think that the heating of milk to 140° F. for ten minutes is sufficient to destroy the micro-organisms in it; he thinks that a temperature of at least 160° F. should be employed and that the milk should be subjected to this temperature for not less than half an hour. This temperature is necessary especially in the case of delicate or ailing children.

Imitation of Human Milk.—Dr. Dessau said that the fad for trying to make imitations of human milk reminds him of the old-time search for the philosopher's stone; cow's milk and human milk are entirely different things. Though they contain what seem to be the same ingredients, though in different proportions, it is probable that some of the ingredients at least are of entirely different natures in the two compounds. It is probable that the feeding of milk direct from the cow before it cools would be one of the most healthy ways of supplying infant food, but, unfortunately, this is not possible under ordinary circumstances, and the next best thing seems to be the proper preparation of milk food by judicious heating.

Childrens' Stomach-Contents.—Dr. Louis Fischer reported a series of observations on the chemistry of infants' stomachs, not with the idea of adding anything new to the knowledge of this subject, but in order to confirm and amplify the knowledge obtained by previous observation. He procured the stomach-contents in a certain number of children by siphoning off the material one to two hours after feeding. Most of the stomach-contents, however, were obtained from the vomit of children. In only two cases was there failure to find hydrochloric acid. One of these children was suffering from rachitis and the other was in very poor general health. It is evident that hydrochloric acid is not often absent from childrens' stomachs. The most successful treatment for the absence of hydrochloric acid in Dr. Fischer's hands is the use of external fara-

digestion and the two drugs nux vomica and hydrochloric acid in drop-doses three or four times a day. After the use of these remedies for some days hydrochloric acid is found on subsequent examinations. As a rule hydrochloric acid is absent when high temperatures are present. Dr. Fischer did not find this rule, however, to be so absolute as has been claimed from the results of previous observations. In a case of measles when the temperature was 105° F., hydrochloric acid was absent, though it had been present before and was present shortly afterward. In a case of scarlet fever Dr. Fischer found traces of hydrochloric acid, though Lee says that hydrochloric acid is always absent during the active course of this fever. At the time that traces of the acid were found the child's temperature was 105° F.

Free Hydrochloric Acid in Children.—Dr. Einhorn years ago in making a series of observations on the contents of childrens' stomachs found free hydrochloric acid was present in only two cases. All of the children that he examined were perfectly normal; combined hydrochloric acid was present, but not the free acid. The gastric acidity in the child is as a whole lower than that of the adult; the albuminates of the milk, which forms the almost exclusive diet of children, combines with the hydrochloric acid, and so does not exist free in the stomach. The acidity that is noticed in the vomit of children is lactic acid and not hydrochloric acid. In febrile conditions in adults there is an inhibition of gastric secretion; this is true not only for the hydrochloric acid, but for the other elements of the gastric juice. This rule holds also for children. In typhoid fever as a general rule hydrochloric acid is very limited; in patients at the German Hospital, however, Dr. Einhorn was able to find some cases in which even free hydrochloric acid was present. It is probable that fever seldom completely inhibits the secretion of acid.

Massage in Gastro-Intestinal Conditions.—Massage is not a therapeutic measure that can be recommended on general principles for gastro-intestinal disturbances; if wrongly applied it may do harm; Dr. Einhorn has seen a case of localized peritonitis occur as the result of overzealous massage in an unsuitable case. In patients suffering from enteroptosis massage will almost surely do more harm than good. It is no uncommon experience, however, to find that patients suffering from this condition have been recommended by physicians to take massage. In children massage may much more easily do harm than in adults.

Tests for Gastric Acidity.—Dr. M. I. Knapp, when told that Congo paper was used to determine the presence of hydrochloric acid, said that this was extremely unreliable, as Congo paper reacts to acetic, succinic, oxalic, formic and in a word to all the organic acids that may be present in the stomach in small amounts; also to monophosphate of magnesium and certain other salts. Conclusions drawn from tests made with Congo paper are exceedingly unreliable. The best test for free hydrochloric acid in the stomach is made with ammonic citrate of iron according to the method recently suggested by Dr. Knapp.

Abdominal Massage.—Dr. Knapp said that abdominal massage, if not applied with great care, may easily do very serious harm. He has seen a number of bad results. Massage may be employed with benefit over the lower part of the abdomen, but not over the stomach. Massage of the epigastric region, when there is any true gastric disturbance, is almost sure to do harm, though it is often recommended.

Bilious Vomiting.—This is a symptom that, according to Dr. Knapp, is often said to occur, but without sufficient reason. True bilious material is seldom contained in the vomit. Bile should always be tested for by Pettenkofer's or some other method before the case is pronounced one of bilious vomiting. The mere greenish yellow color of the vomited material with the bitter acid taste is not sufficient to demonstrate its biliary origin, or even to prove an admixture of bile present. This greenish material will often be found to be a pure culture of mould.

Hydrochloric Acid and Prognosis.—Dr. Fischer is inclined to think that the presence of hydrochloric acid in certain infectious diseases may prove a sign of a good prognosis in cases in which ordinarily hydrochloric acid is absent. In some recent cases of septic diphtheria, in which the prognosis was very bad, Dr. Fischer found only one patient in whom free hydrochloric acid was present during the course of the disease, and this was the only patient that ultimately recovered. In septic diphtheria, the fever is usually very slight and the absence of hydrochloric acid is not due to high temperature, but to functional inhibition from general prostration.

Massage in Children.—Dr. Fischer has used massage very extensively in children, and is more gratified with the remedy the more he employs it. For atonic constipation this remedy presents the best possible method of treatment. In gastric disturbances dependent upon poor circulation, abdominal massage does excellent service. In gastric cases generally, however, the sheet anchor in treatment must be nux vomica and dilute hydrochloric acid.

SOCIETY OF ALUMNI OF BELLEVUE HOSPITAL.

Stated Meeting, Held January 2, 1902.

The President, Alexander Lambert, M.D., in the Chair.

The Personal Liberty Plea as Made Against Medical Legislation.—Dr. Floyd M. Crandall read a paper with this title. He said that he was led to write it by the fact that every attempt to advance the standard of medical practice in this country is invariably met by the complaint that the personal liberty of some of the citizens of the State is threatened. The last argument of this character was that recently made by Mark Twain while speaking in favor of the osteopathic bill before the New York Legislature. Dr. Crandall's paper is an answer to these arguments. Unlike Mark Twain, who is an educated man, there are tens of thousands of people who are unable to judge either of the character of the practitioner or of his treatment. The only protection for these unprotected thousands is the guarantee afforded by the State contained in the license to practise. Medical laws are not enacted for the benefit of the medical profession, but for the good of the people. The medical profession does not enjoy privileges which it is not willing to share with others. It asks only that it be not discriminated against by allowing those to practise who are only partially qualified. It asks only fair play and that all be treated alike. It asks that all who are granted the privilege to treat disease shall be obliged to enter at the same door—that there be no subterranean passages or short cuts. To require certain qualifications of some and to permit others to enter with less would be a blow against personal liberty and equal rights. Absolute liberty can only be found in solitude. It cannot exist in civilized society, for something must be yielded by each individual when he comes in contact with others. Restrictive laws are necessary and are designed for the protection of the many against the few. There is a vast difference between liberty and license, which the argument of Mark Twain completely ignores. He

adopts the old fallacious argument that because the State allows religious liberty, no restriction should be put upon the practice of medicine. The two questions are so dissimilar that the argument is utterly worthless. Religion is a matter of faith and belief; the practice of medicine is a matter of acts. Religion is the relation between man and his Creator; the practice of medicine is a relation between man and man. The American State does not interfere with beliefs, only with acts. The services of religion, being between man and God, come rarely, therefore, under the jurisdiction of the State. The practice of medicine, on the other hand, being a relation between man and man, must continually come under its jurisdiction. It is a fallacious argument, therefore, to hold that because one requires but few restrictions, the other also requires but few. Were it not for the fact that the arguments advanced by Mark Twain are repeatedly heard, it would seem waste of time to argue that the State in requiring certain necessary qualifications is not abridging the liberty of its citizens. It would seem almost childish to contend that the State does not use unfair discrimination in requiring the same qualifications for all, and that those who have fulfilled its qualifications are not the recipients of special favors.

In the discussion Dr. Frederick Holme Wiggin said that in talking with the members of the Legislature with regard to these matters, he had found that the great difficulty in the past had been that the Legislature and the public generally believed that whenever physicians had endeavored to improve the standard of the practice of medicine they had done so entirely from selfish motives. Probably this feeling had originated from the fact that in earlier times regular physicians had opposed the practice of irregular physicians or eclectics because they differed on matters of treatment. So long as objections were made to a class of individuals because of differences of opinion of this nature failure would result. On the other hand, if efforts were directed to securing the licensing only of those having the proper qualifications, a good deal should probably be accomplished. This was like requiring an engineer to have a proper knowledge of the steam engine before being allowed to run one. In time there might be one general examining board. So long as there are various examining boards for so-called different schools of medicine, this strife would probably go on.

Dr. Parker Syms said he thought the weakness of the efforts in the past had apparently arisen from insisting too much upon mere methods of treatment. It was certainly this in the past which had given strength to the homeopaths. It was now well known that the vast majority of diseases could be successfully treated without drugs, and yet they were almost invariably treated by means of drugs. For this reason almost any kind of a healer must succeed in a large proportion of cases. Efforts should be directed to improving the standard of education for regular practitioners, leaving others out of consideration. The reader of the paper had very properly suggested that the standard of education should be raised, not in the schools, but by means of systematic post-graduate education. This could best be brought about by working together, all the specialists contributing to the general fund of knowledge.

Some Clinical Aspects of Chronic Non-Alcoholic Gastritis.—Dr. George R. Lockwood was the author of this paper. He said that an analysis of symptoms presented in a large series of cases showed great variation from the traditional course of the disease. The cases were divided into those with high acidity, normal acidity, and low acidity. Those with high acidity complained either of hyperacidity, "biliousness," or of diarrhea without lesion in the colon. Those with normal acidity were anemic and constipated. Those with low acidity were neurasthenic, poorly nourished, complained of "biliousness" or of diarrhea; nausea did not occur, nor did any patient vomit. The appetite was uniformly good. Gas occurred only when there was atony. Tests showed in the gastric contents of these cases no fermentation whatever, even when the gastric contents were kept at blood temperature for days.

Dr. Alexander Lambert in discussion asked the author whether he had found that oxaluria was a feature in these cases. He did this because he had found a number of patients presenting the digestive symptoms described in the paper and associated with oxaluria.

Dr. F. W. Jackson said that he was supposed to open the discussion, but he did not see how this could be done. All present must feel like thanking Dr. Lockwood, and congratulating him on his very instructive paper. If the position taken in the paper were to be accepted it was evident that there must be great difficulty in making the diagnosis. He wished Dr. Lockwood, in closing the discussion, to give some points in the diagnosis of gastritis which might be of service to those who were not experts in making gastric analyses. Physicians frequently met with secondary anemias without focal symptoms, and if the anemia were due to gastritis the physician should be able to ascertain this.

Dr. H. S. Stokes said that he had found a good deal of difficulty in general practice in securing the consent of the patient to washing out of the stomach, though many would consent if it were insisted upon by a specialist.

Dr. Lockwood replied that he had had only two persons refuse to submit to the treatment.

Dr. H. H. Seabrook asked how the atonic cases were distinguished from the others.

Dr. Lockwood said that this was one of the most difficult problems in gastric work. If, when in the fasting condition, six ounces of water when put into the stomach produced a splashing, such a stomach was atonic. When atonic, food would be retained longer than proper. There were, of course, conditions of temporary atony connected with a cold or perhaps with an attack of grip, but this would soon pass off. In the hyperacid cases there was some retention. He had made experimental lavage an important differential point, in cases of prolonged food retention, between atony and prolonged food retention with contracted pylorus. In cases of contracted pylorus, all of the water was returned; in cases of atony there was a large quantity of residual fluid. As the cases under intragastric faradization improved the stomach would be found able to expel the water introduced. Replying to the question as to the relation between oxaluria and gastritis, Dr. Lockwood said that oxaluria was probably dependent upon functional disturbance of the liver arising from the presence of abnormal products in the blood, these abnormal products being the result of perverted function of the stomach. Oxaluria, however, bore no relation to acidity or hyperacidity. In answer to Dr. Jackson, he would say that one should suspect gastritis (1) in any long continued gastric neurosis; (2) in all cases of biliousness and functional disturbance of the liver; (3) in all cases of persistent diarrhea; (4) in all cases of anemia and constipation not readily controlled by treatment and without apparent cause, and (5) in all melancholias or cases of depression, and in cases of causeless neurasthenia.

EASTERN MEDICAL SOCIETY OF NEW YORK CITY.

Stated Meeting, Held January 10, 1902.

The President, R. Abrahams, M.D., in the Chair.

A case of "Amaurotic Family Idiocy" was presented by Dr. A. Hymanson. Dr. Schapringer demonstrated the eye lesions of the same case. A case of "Bullous Eruptions in a Child" was presented by Dr. William S. Gottheil. A case of "Ulcer of the Esophagus" was reported by Dr. M. I. Knapp.

Otitis Purulenta in Infants.—This was the title of a paper read by Dr. Max Toeplitz. After a brief description of the anatomy of the ear in the newborn and infant, with especial reference to the difference from that of the adult, Toeplitz emphasizes the position of the mucous cushion of the tympanitic cavity at birth, for the question of existence and future development of the so-called otitis media neonatorum. This is not acknowledged as an independent disease, as proven by the numerous autopsies on children whose middle ears were found to be filled with pus, in, or without, connection with other diseases. He then describes the two forms of otitis purulenta, their symptomatology, course, duration and complications, particularly in acute infectious diseases. The causes of otitis purulenta are then exhaustively treated as well as its bacteriology and frequency of occurrence. In conclusion, the treatment is briefly sketched and the indications for operations (paracentesis, mastoidotomy) are well defined.

Dr. Edward Fridenberg, in opening the discussion, called attention to the difficulty in diagnosing otitis in infants; in these young patients it may be mistaken for typhoid fever, meningitis, etc., until the spontaneous rupture of the drum membrane, when the symptoms suddenly abate. He emphasized the importance of routine examination of the ear by the general practitioner. Dr. Fridenberg stated that 90 per cent. of all chronic otorrheas in children are due to extension of an inflammation from the nose and throat to the ear, particularly in cases of tonsillitis, measles, scarlet fever, etc.

The Indications for the Surgical Treatment of Cholelithiasis.—Dr. A. A. Berg said he considered that those cases of cholelithiasis that manifest themselves by cholecystitic pain and attacks of biliary colic uncomplicated by cholecystitis were benefited by medical treatment. Great severity or constancy of these symptoms in spite of medical treatment called for surgical intervention. The first attack of acute cholecystitis accompanying calculous disease of the gall-bladder formed a strong indication for the abandonment of the medical and a resort to surgical treatment. For even though the acute attack subsided the secondary infection of the gall-bladder and ducts by the bacteria which gave rise to the acute cholecystitis, did not pass away. These bacteria remained residents of the gall-bladder and ducts, exciting from time to time fresh attacks of cholecystitis. In the apparently quiescent periods between these acute attacks, they are giving rise to local lesions, and by their life and development to a chronic general intoxication, the latter manifesting itself by fatty and waxy degeneration of internal organs. The toxemia is especially important, and to it is ascribed the debilitated and emaciated condition of the patients who have suffered for a long time with attacks of acute cholecystitis. Dr. Berg considers that early operation after the first attack of cholecystitis will avoid these serious local and toxic complications. As a rule operation is not imperative during the first acute attack of cholecystitis. This is because the great elasticity of the gall-bladder enables it to accommodate even considerable quantities of inflammatory products without these latter becoming under much tension. This attribute of distensibility also explains the infrequency of perforations of the gall-bladder, as compared with the appendix. Operations during the acute attack are indicated by a marked intensity of the local and general manifestations, otherwise the operation can be postponed until the quiescent period after the attack. To delay and procrastinate until an empyema or gangrene of the gall-bladder has taken place, or until cholemia, infective cholangitis, obstructive jaundice or perforation has occurred, is unjustifiable and unwarranted. The mortality after early operations is 2 to 3 per cent., whereas the death-rate in the later complicated stages of the disease rises over 50 per cent., even in the most expert hands.

Dr. Berg's conclusions may be stated as follows. (I.) Indications for medical treatment; cholecystitic pain or attacks of biliary colic, in either case unattended with fever. II. Indications for medical treatment; (1) operations of choice, undertaken in the quiescent period, with the object of avoiding serious complications; a simple procedure and followed by 2 to 3 per cent. mortality. (*a*) Severe cholecystitic pain or oft-repeated biliary colic, persisting in spite of medical treatment, in virtue of which symptoms the patient becomes an invalid and incapacitated for work. (*b*) After the first attack of acute cholecystitis, associated with fever. (2) Compulsory operations; undertaken at any time of day or night, often amidst unfavorable surroundings and in patients who are skeptic, emaciated and of low vitality. Difficult and laborious procedures and attended with high mortality—50 per cent. (*a*) Intensely acute attacks of cholecystitis. (These may be the first indication of calculous disease, but usually follows previous milder attacks.) (*b*) Hydrops, empyema, gangrene or perforation of the gall-bladder, cholemia, abscess of the liver, and diffuse peritonitis.

Dr. A. G. Gerster opened the discussion and stated that he wished to insist that the most important point in the treatment of cholelithiasis is first to make a diagnosis. This is not always easy. Some cases are diagnosed by the patient himself, but others are very difficult of diagnosis and tax the skill of the most experienced. This is particularly the case with some women whose liver and gall-bladder are situated high up in the abdominal cavity and covered by the lower part of the right thoracic wall. Dr. Gerster considers that a well and carefully established anamnesis, particularly as to paroxysmal pains in the abdomen, the most important aid in diagnosis. After eliciting a history pointing to gall-stones, careful palpation may reveal a pear-shaped tumor which ascends and descends with the movements of respiration. He then emphasized the importance of abdominal palpation in cholelithiasis. As to treatment, Dr. Gerster is of the opinion that medical treatment is to no avail, excepting for immediate relief. Surgical treatment is the only means of permanently curing these sufferers.

Dr. A. E. Isaacs took exception to the statement that biliary colic without suppuration in the gall-bladder is not attended by elevation of temperature. He has frequently observed cases of acute cholelithiasis in which the thermometer registered from 102° to 105° F. While Dr. Isaacs does not exclude the possibility that the pus in the gall-bladder might in these cases have followed the exit of the stone, still the fact remains that elevation of temperature during an attack of biliary colic is no proof of dangerous suppuration in the gall-bladder. Dr. Isaacs does not think that operation is indicated in all cases of cholelithiasis. Many people have several attacks of biliary colic and then remain free from it for the rest of their lives.

MEDICAL ASSOCIATION OF THE GREATER CITY OF NEW YORK.

Annual Meeting, Held January 13, 1902.

The Vice-President, William McCollum, M.D., in the Chair.

Election of Officers.—The following officers were elected: President, Dr. Andrew H. Smith; Chairman for the Borough of The Bronx, Dr. S. Carrington Minor; Member of the Executive Council, Dr. Reynold W. Wilcox.

Treatment of Urethral Strictures.—A discussion on the treatment of urethral strictures was opened by Dr. Ramon Guiteras. Strictures were classified, he said, as anterior and deep, the former being situated between the meatus and a point within an inch of the cut-off muscle and the latter between this point and the posterior urethra—thus including the membranous urethra and the inch in front of it. He reviewed the causes, symptoms and diagnosis of stricture, stating that the most dangerous symptom, or rather complication, was an acute attack of retention. It usually occurs in strictures of small size, deeply seated, when, owing to some exposure, dissipation or reinfection, there has been sufficient congestion about the stricture to render it impassable, or nearly so. Usually strictures of small size, that is those below No. 15 French, are the ones that give rise to serious urinary symptoms. In general terms it may be said that all strictures, whether large or small, anterior or deep, that can be dilated, should be treated in this manner. All others should be operated upon if they give rise to symptoms warranting such a measure. In order that the urethra may be intelligently examined, a small meatus, due to congenital narrowing or linear stricture just behind the meatus, should be cut to No. 32 or No. 34 French, if, as is usually the case, it cannot be dilated.

Dilatation.—The three methods of dilatation are the continuous, the gradual, and the rapid. The first is usually employed in strictures of small caliber which admit only a filiform or a very small olivary woven catheter. After one of these instruments has been introduced it should be allowed to remain in position for twenty-four hours, the patient passing his urine along its side. A larger one is then introduced, and allowed to remain for the same time; and so on, until the dilator or sound can be introduced and the narrowing can be gradually dilated. Gradual dilatation consists in passing dilators or sounds every few days until the urethra has been stretched to the normal size, or as near the latter as possible. In rapid dilatation the size of the urethra is increased in one or two sittings, and it is particularly applicable to such patients as feel that they cannot submit to operation and have not the time for gradual dilatation. Personally, Dr. Guiteras said, he did not favor this method, although he had seen the most admirable results accomplished by the Newell dilator. Most dilators are of large size (over No. 15 French) but the Newell instrument is No. 8 French, and is passed connected with a filiform guide. Dilators are especially efficient in the treatment of strictures of medium caliber, *i.e.*, from No. 18 to No. 20 French, and the best instruments are those of Oberlaender and Kollman. Dilators should never be introduced unless enclosed in a rubber cover, well lubricated with sterilized lubrichondrin; and in office work it is well to boil the instrument, with the cover on, before introducing it. Sounds, of course, are and always will be useful, their employment constituting the most general means of dilatation; and the heavier the sound, the better. In dilating either with sounds or with dilators the stricture should not be increased more than one or two millimeters at each dilatation, and afterward the canal should be washed out with a nitrate of silver solution of a strength varying from 1-600 to 1-4,000.

Operative Treatment.—All strictures that cannot be dilated should be cut. All narrowing of the navicular fossa should be cut on the floor of the urethra with a blunt-pointed bistoury, with the exception of cases of balanic hypospadias, in which the incision should be directed upward to the roof. Anterior strictures of large size (over No. 15 French) that will admit an Otis urethrotome should be operated upon with this instrument, the incision being made in the median line of the dorsum of the canal. Those of small size should be cut with the Maisonneuve urethrotome in the roof of the canal. Strictures of sufficiently small size to give rise to annoying symptoms should be cut externally through the peritoneal urethra on a grooved guide, tunneled sound, or catheter that has been passed through the urethra beyond this point. When anterior and deep strictures are both present the method adopted should vary according to the circumstances of the case.

Having described the method of operating in impermeable strictures, Dr. Guiteras expressed the opinion that the actual number of such strictures was very small, and said that in the last five years he had encountered but one case in which he was not able to pass an instrument. With filiform bougies and a good lubricant he thought that almost any stricture could be passed, especially if the patient be put to bed and treated with diluents, hot sitzbaths, hot applications, and antispasmodics for a few days. He said he spoke strongly on this subject of passing guides through a stricture before operating, because he felt convinced that the patient stands a much better chance of recovery when the surgeon can make a straight clean cut through a stricture on a guide than when he flounders about in the dark in a bleeding perineum, stabbing at the neck of the bladder in the hope of opening it behind the stricture. He aways tries to pass a filiform or flexible guide before operating; if not successful and if the case is not an urgent one, he postpones the operation and makes further attempts on other occasions, until he succeeds in passing it. After it is once passed it is tied in until the day and hour of operation, and sometimes a patient remains in bed for three days before he is operated on, passing his urine by the side of the instrument thus retained.

Treatment Before and After Operation.—The treatment of a patient before operation consists in promoting free diuresis with large quantities of water, the administration of urotropin (15 grains three times a day), and the washing out of the bladder twice a day, provided the stricture is of sufficiently large caliber to permit the passage of a catheter. After operation the free diuresis and use of urinary antiseptics should be continued. After internal urethrotomy sounds should be passed at the end of forty-eight hours, and then every two days while the patient is confined to the house or hospital. After external urethrotomy the whole urethra is flushed out with hydrogen peroxide, and then with boric acid solution. A large thick-walled catheter, No. 40 French, is inserted through the perineal opening, pinned to the side of the incision and packed about with gauze. While the urethra and bladder are washed out twice a day with boric acid solution, the dressing need not be changed for forty-eight hours, when the tubes are taken out and sounds passed. The sounds should be passed every two days, the tubes (which should be employed for from four to six days) always being withdrawn before their passage. For a considerable time the

patient's bladder should be washed out through a catheter with a weak solution of nitrate of silver.

Pathology of Stricture.—Dr. Robert H. Greene said he believed that all pathologists were agreed that stricture follows a granuloma or ulceration which in the great majority of cases is preceded by a urethritis. This process may make a soft band in the urethra which has often been operated upon for stricture. It is in reality not a stricture at all. These facts are generally acknowledged; but there are two questions which have not been definitely settled, viz.: (1) How long does it take this cicatricial tissue to develop in a urethra which has not been wounded with instruments? (2) Does this process of cicatrization ever go on in a urethra not wounded to such an extent as to necessitate a cutting operation? Operations upon strictures of large caliber had apparently been done away with in the last few years, and he thought that surgeons were deserving of much credit on this account. It seemed to him that at the present time the majority of authorities consider stricture, following urethritis, of such severity as to require operation quite rare in those under forty. In men older than that the cicatricial tissue forms faster. The second question, Dr. Greene said, was very difficult to answer because almost all the strictures which are cut give a history either of previous operation or of the careless use of instruments. Personally he believed that a man who has never had his urethra wounded, thereby facilitating the formation of cicatricial tissue, will never have a stricture so severe as to require cutting, although such stricture may require dilatation. In one of the hospitals with which he was connected he saw a number of cases in which there was such a mass of connective tissue in the bulbomembranous urethra that an operation was required. He generally did a perineal section and also an internal urethrotomy, if required, using either an Otis or a White urethrotome. As to external urethrotomy, he thought the incision should be as limited as possible. Whether there were any hemorrhage at the time or not, the parts should be well packed during the operation, as he had seen severe secondary hemorrhage in cases in which this was neglected. In conclusion he exhibited a new filiform bougie manufactured by Tiemann, which was constructed of catgut and which could sometimes be made to pass when the ordinary filiform bougie failed. It was superior, he thought, to the Banks bougie, which was made of whalebone.

Characteristics of True Stricture.—Dr. Wm. K. Otis said that the formation of stricture was practically the formation of scar tissue which entirely surrounds the urethra. Unless the scar tissue does entirely surround the canal stricture does not exist. Plaques on one side do occur and are composed of cicatricial tissue, but they cannot be detected by means of bulbous bougies, etc. When, however, such tissue surrounds the urethra it goes on steadily contracting, and so gradually narrows the caliber of the canal at one point until it becomes an annoyance to the patient. After dilatation the trouble will return, and it will do so indefinitely whenever the dilatation is discontinued. When a stricture had become thoroughly organized he did not believe it could be cured by dilatation. As soon as it has been divided by a clean cut the stricture ceases. The ends spring apart. The cicatricial tissue may go on contracting, but after it has been severed with the knife it no longer diminishes the lumen of the canal. He could not agree with Dr. Greene, and said that he had known of many instances in which instruments had never been used on the urethra in which strictures had gone on to retention of urine and in which the smallest filiform bougie could not be passed.

Narrow Strictures Must be Cut.—Dr. Otis said that when it was necessary to operate on a patient he did not take as much time as formerly in trying to pass filiform bougies. When filiform bougies can be passed only with difficulty, or when it is necessary to employ special forms of such bougies, the case is one that requires operation. The stricture can no doubt be dilated, but the patient's life is in danger the moment he gets beyond the reach of a competent surgeon.

Patience and Perseverance Generally Successful.—Dr. James Pedersen said there were undoubtedly many cases which could be better treated by dilatation than by cutting. He had seen strictures so small that a filiform bougie could scarcely be made to pass, yet in which careful manipulation proved very satisfactory. It was true that the stricture was not really cured, but the patient had been placed in a condition which made him quite independent of the surgeon. In illustration he narrated a remarkable case of Dr. Bangs' in which patience and perseverance had been entirely successful in the end, while the patient had not been at all debarred from his usual business and pleasures.

Dr. Robert W. Taylor said he had no faith in what are called large strictures. When preparing his book he made a great effort, through efficient and painstaking assistants, to find out what these cases were, and he had been able to secure only one instance. In this case there was a small band, about half an inch in length, which ended to the right of the median line. Only twice in the last two years had he seen a true stricture in men under twenty-five, and in one of the cases the patient had become infected when only twelve years old. Under the age of thirty-five men have what is known as soft stricture, consisting of granulation hyperplasia.

Divulsion Condemned.—Dr. Taylor condemned in the strongest terms the dilators devised by various surgeons. He designated Holt's as "an instrument of death," and said he hoped that Oberlaender's and Kollman's would never come into vogue in this country. In the abandonment of such ruthlessly dangerous instruments he thought there had been a great advance in the last few years. It was the mild force that accomplished the desired purpose. Gradual dilatation with straight sounds or olivary bougies should be practised. Plenty of time should be taken with stricture cases, and the sounds should not be passed too often. Above all, careful and systematic treatment of the urethra with nitrate of silver solutions is essential. By these means the great majority of cases can be cured without cutting. When the latter is necessary the Otis urethrotome is the most satisfactory instrument for the purpose. In cases in which after a persevering trial of dilatation a sound larger than No. 15 cannot be passed without causing great irritation, it is advisable to practise external urethrotomy first and afterwards internal urethrotomy.

JOINT MEETING OF THE CHICAGO MEDICAL SOCIETY WITH THE CHICAGO SOCIETY OF INTERNAL MEDICINE.

Held January 29, 1902.

SYMPOSIUM ON CIRRHOSIS OF THE LIVER.

The first paper was read by Dr. Arthur R. Edwards, who said that Rosenstein suggested three classes of cirrhosis, namely, (1) the genuine contracted liver, the cirrhosis of Laennec, an analogue of the genuine contracted kidney; (2) the hypertrophic icteric cirrhosis, an analogue of the parenchymatous nephritis; (3) the

hypertrophic mixed form, in which hypertrophy and atrophy combine, an analogue of the secondarily contracted kidney.

Gilbert and Surmont made the following classification: (1) Biliary cirrhosis. (*a*) Hanot's biliary hypertrophic cirrhosis; (*b*) biliary cirrhosis due to obstruction of the bile vessels, with infection; (*c*) experimental biliary cirrhosis due to ligature of the bile vessels and infection of the same; (*d*) biliary cirrhosis in the lower animals due to distomata, eggs of the nematodes, coccidium, etc. (2) Vascular cirrhosis. (*a*) From exogenous poisons, *e.g.*, alcohol, lead, phosphorus, etc.; (*b*) from autogenous intoxications, *e.g.*, dyspepsia, gout, diabetes; (*c*) infections or toxemias, tuberculosis, syphilis, malaria, exanthemata, etc.; (*d*) arteriosclerotic; passive congestion. (3) Lymphatic cirrhoses. Capsular cirrhosis; perihepatitis.

The classification he had suggested was attempted rather with a view of including the principal conflicting clinical and pathological divisions than of offering an infallible or as strictly scientific arrangement of the varieties of cirrhosis of the liver as Chauffard's. (1) Capsular cirrhosis. Also known as glissonian or lymphatic cirrhosis. (*a*) Chronic perihepatitis, isolated or part of a chronic peritonitis. (*b*) Portal vein syphilis, also vascular in origin. (2) Vascular cirrhosis. (*a*) Hepatic vein. (*b*) Stasis cirrhosis (cyanotic induration). (*c*) Laennec's cirrhosis; also that of Brieger and Sabourin, known as bivenous cirrhosis. (3) Portal vein. (*a*) Laennec's cirrhosis or atrophic. First stage, pseudohypertrophy; second stage, atrophy. (*b*) Hypertrophic alcoholic cirrhosis, like Laennec's, only remaining large; fatty cirrhosis. (*c*) Cirrhosis from portal vein, syphilis, and from pyelothrombosis. (*d*) Arteriosclerotic cirrhosis. (4) Biliary cirrhosis. (*a*) Obstruction, retentions, icterus and cirrhosis. (*b*) Biliary or hypertrophic, in French sense (Hanot's cirrhosis), with icterus or without icterus. (5) Mixed cirrhosis. Vascular and biliary varieties combined in varying proportions.

Cirrhosis in Childhood.—Dr. Frank X. Wales read a paper on this subject. Cirrhosis of the liver was one of the most uncommon diseases that occurred during infancy or childhood. The cirrhoses belonged to the decadent period of life, and it was only under the most unusual conditions that they were encountered during its ascendancy. Though similar morbid factors be evolved within the economy of the child that in the adult led to a gradual parenchymatous decay and interstitial overgrowth, still in the child the nutritive and reparative powers of the individual were sufficient to sustain and restore the hepatic parenchyma, even though seriously damaged. In children, who die as a result of some overwhelming sequel of the acute infectious diseases, the liver frequently was found to be the seat of an extensive cellular infiltration of the connective tissue, with a granular, fatty, or even necrotic degeneration of the epithelium, and so often was this seen that one might believe there was always more or less hepatic inflammation in the severer cases of infection. Klein examined the liver in eight consecutive autopsies on scarlet-fever patients and discovered acute hepatitis in all. Moreover, sufficient corroborative evidence was found clinically in the enlarged livers and subjaundiced skins that were present in the many severe infections that ultimately recovered to assume that the acute hepatitis was not confined to the lethal cases. Despite the frequency of this acute hepatitis, it was most unusual to meet with a case in which there was the slow productive overgrowth of subsidiary tissue at the expense of the granular elements which constituted the morbid picture of cirrhosis. Cirrhosis was an advanced lesion, slow and tardy in its evolution, and demanded time for its development. It was so rare a disease in the young that those who had had the largest clinical experience could count their cases in the units. Though the recent literature had greatly multiplied the number of recorded cases and some had advanced the statement that the disease was not uncommon in the child, yet the infrequency of the disease could be sufficiently substantiated by quoting the statements of a few of the greatest clinicians. Baginsky had seen four cases. Henoch had never seen the disease fully developed in children. Charles West, among 70,000 sick children, saw cirrhosis but four times. Frerich saw but one.

Male children were afflicted more often than female in the proportion of five to one. In Palmer's group, the ages varied from one month to eighteen years, and fifty per cent. of these occurred between the ninth and fifteenth years. An alcoholic history had been obtained in less than twenty per cent. of the recorded cases. In a few of these the amount of alcohol taken daily for a considerable period of time had exceeded a pint of brandy, but in most of them only a small quantity of spirits had been drunk. While the influence of alcohol in the production of cirrhosis in children was decisive, it was not so consequential as in the adult. Syphilis was mentioned as an etiological factor in about ten per cent. of the cases. Tuberculosis was a relatively frequent causal factor. The acute infectious diseases had been considered as potent causative exciters, but in no case had the evolution of the cirrhosis been unequivocally connected with the acute infections, nor had the infections occurred with greater frequency than might be considered accidental, and perhaps not oftener than in the average run of children. Chronic sepsis, particularly where there had been a chronic peritonitis, had been an occasional factor. Cirrhosis of the liver, secondary to the nutmeg liver of heart disease, had occurred only a few times. Thompson had collected a number of instances of obliteration of the bile-ducts in the new-born which was followed by cirrhosis.

Dr. Wall then discussed at length the symptomatology, the diagnosis, prognosis and treatment of cirrhosis of the liver in childhood. Of treatment of cirrhosis of the liver in children he said that therapy up to now had been fruitless. Could the disease be anticipated before the advent of the cirrhosis, one might hope for much by withdrawing those factors which might have any baneful influence upon the child, and by giving careful attention to the hygiene and diet. Much had been claimed, particularly by the French school, for an exclusive milk diet, even if the cirrhosis be established. The use of the so-called resorbent waters, such as Carlsbad, the inunctions of gray salve, and the rational fulfilment of the symptomatic indications grasped the present possibility.

Pericarditic Pseudocirrhosis of the Liver.—Dr. James B. Herrick read a paper with this title. In 1896 Pick described three cases to the symptom-complex of which he gave the name pericarditic pseudocirrhosis of the liver. Clinically, they presented relatively slight edema of the lower extremities, enlarged liver, and rather obscure cardiac findings. These cases showed postmortem adhesive obliterating pericarditis; adhesive pleuritis, and changes in the liver described as nutmeg liver, cirrhosis of the liver, coarsely granular liver. From his studies of these cases and other similar ones reported by other observers, he concluded that this symptom-complex resembling true cirrhosis was caused by a late pericarditis that induced circulatory disturbances in the liver, leading to an increase of connective tissue, in this way producing portal stasis and ascites.

Dr. Herrick referred to the importance, from a diagnostic standpoint, of inquiring into the past history for

symptoms suggestive of preceding pleurisy for pericarditis, and said that the physical signs of active or healed pleurisy should be sought for as well as those of perihepatitis. The coarser signs of pericardio-mediastinitis, such as the systolic retraction interspaces, the diastolic rebound, the paradoxical pulse, the fulness of the veins in the neck, and the feeble apex impulse, should also be sought for.

Dr. Herrick referred to three cases of this disease that had occurred in his own practice, in one of which an autopsy had been secured at which an adhesive pericarditis with calcification had been found, with extensive hyperplastic pleuritis and cirrhosis of the liver, all being due to tuberculosis. The clinical features of this case had corresponded very closely to those of the third case described by Pick. The other two patients were still living, but showed enlargement of the liver, pronounced ascites, evidence of fluid in the pleura, or of adhesive pleurisy, with symptoms and physical findings suggestive of pericardial adhesions.

He agreed with Strümpell that the cases were not all of one pattern and, though there was some justice in the criticism that had been offered to Pick's explanation of the occurrence of ascites and that one could absolutely not rule out the influence of local peritonitis, he thought further that there was a possibility that the trouble while originating in the pericardium might start from this point as a center and involve the contiguous pleura and peritoneum; in other words, that passive congestion of the liver was not an ample explanation for all the phenomena of the disease. While Pick's observations had been preceded by somewhat similar observations of others, and while one might criticize somewhat his line of reasoning, full credit must be given to Pick for having most accurately described the symptom-complex and for calling the attention of the profession to this peculiar condition.

Medical Treatment of Cirrhosis of the Liver—In a paper with this title Dr. John A. Robison stated that cirrhosis of the liver was incurable if the fibroid stage had supervened. Prior to this stage there was a small chance for recovery, especially in the syphilitic cases. The medical treatment should be considered, therefore, under three headings: Prophylaxis, the first stage of treatment, and the palliative treatment. There was no doubt that there was an hereditary predisposition to the disease in certain families, especially in those having a gouty diathesis. He believed a long line of tipsy ancestors, who had died of cirrhosis of the liver, might engraft on their progeny a susceptibility to the disease. The knowledge of such a tendency should be of great value to the patient in conducting his habits of life in a channel in which toxic products would not produce the cirrhosis.

The prevention of the disease would be easy in a large number of cases if physicians could prevent the toxic influence of ingested and autochthonous poisons. But unfortunately for the cirrhotic victims, their medical adviser's advice was seldom asked and less often followed until active signs of the disease were present. By this time the process had been aroused by poisons, infections, or arteriosclerotic changes. The problem, then, was how to arrest the disease, or if this be impossible, how to alleviate it. If the use of alcoholics be the cause of the disease, it should be stopped If malaria, the proper curative measures should be adopted; if the disease was of syphilitic origin, active antisyphilitic treatment should be established. If the cirrhosis was manifestly the result of disease of other organs, treatment should be specifically directed toward them. No matter what the etiological factor, the general management of the patient, the supervision of his daily habits, exercise, diet, and the treatment of the various symptoms must receive constant attention. The diet should be plain and simple, free from alcoholics, strong condiments, or spices, relishes, sauces, fried food, pastry, and sweets. Vegetables and fruits might be allowed, and milk should be a main staple. So far as possible, the patient should receive plenty of rest and fresh air. An outdoor life is beneficial and a sojourn in mild climates, especially at mineral spring resorts, was often beneficial. In the early stage the administration of calomel was recommended by many, on the theory that mercurials had the power of causing the absorption of fibrinous exudations. But there was no evidence to prove that mercurials had such power in the case of proliferation of connective tissue; hence the good results obtained in cases in which mercurials had been given must have been due to their action on the intestinal tract. Vomiting should be allayed by bismuth and alkalies, with the addition of thymol, resorcin, creosote, etc., if fermentative dyspepsia is present. The routine treatment of ascites in the past had been to give hydragogue cathartics and diuretics, but it was like trying to empty a vessel by pumping out as much or less water than flowed in. The drug treatment was unsatisfactory, and paracentesis should be resorted to early. The union of the liver to the abdominal wall with omentopexy would relieve the portal circulation before the ascites was established. Paracentesis should be performed early, and often, if the fluid rapidly accumulated, as the pressure embarrassed respiration and the heart's action. Opium, absolute rest, and the withholding of food from the stomach, were essential in the treatment of hematemesis. In case the diarrhea was intractable, large doses of the bismuth compounds were the safest remedies. In many cases it could not be checked, and it would be necessary to support the patient by administering the concentrated foods and alcoholics. Exhaustion should be combated by the use of tonics and restorative remedies.

BOOK REVIEWS.

MEMOIRS AND LETTERS OF SIR JAMES PAGET. Edited by STEPHEN PAGET, One of His Sons. Longmans, Green and Co., New York.

THERE is nothing that appeals to the thinking man as the biography of another who has worked and achieved along his own lines; and there is, perhaps, nothing that so comforts the one who is striving as the knowledge that he who has won fame, has done so through no trick of fortune or accident of birth, but through the hardest work, in spite of the worst luck, and in the face of every discouragement.

The name of Sir James Paget shines before medical men with a brilliancy that dazzles them into the belief that he was born to the friendship of the great, and predestined to have kings and queens among his patients. As a famous surgeon, as an orator, an author and a scientist he is known to every one; but who knows of his frugal hard-working youth, as a surgeon's apprentice in a country town, where he taught himself French by translating Bichat's *Anatomie Générale* and took his recreation in making botanical and zoological collections?

This volume, containing his modest autobiography and many letters, is made doubly interesting by parallel commentaries written by his son, supplying information about the hospital in which he was a pupil, the hospital museum of which he was the curator at £100 per year, and, finally, St. Bartholomew's Hospital where he was for many years the warden and for many more the most popular lecturer.

No physician who is trying to keep abreast of scientific thought while earning his living can read this book without marveling at the man's energy by which he was able to fill an onerous position at a great hospital, lecture to crowded classes, support a family of six children, shoulder his family's debts, and, at the same time, be the exponent in England of the vast new scientific movement that was being born in Germany, in the laboratories of Muller and Virchow. And how many who have striven will take comfort from the frank confession, "During the first seven years after obtaining my diploma my largest income from practice was £23, 13s.; and until I had been a surgeon for sixteen years it had never exceeded £100."

After following the crowded details of his busy life, and the unnumbered hours of work in which he acquired his skill, and having passed with him through the anxiety of the risk in taking a house and launching out into surgical work, it gives one a positive thrill to read that his income steadily increased until it exceeded £10,000. Of this time he writes, "In looking back on this success I feel quite unable and unfit to judge how far it was due to my fitness for practice. I was not disqualified by any of the gravest hindrances to success, as by being habitually idle, time-wasting, unbusiness-like, unpunctual, uncivil, unable to work with others—faults which I have seen singly or together spoiling the careers of men whose knowledge might have brought them great success. Neither, on the other hand, could I assign any part of my income to self-advertisement, or sheer impudence, extortion, unfairness, or mere greediness. I think it was all so far fairly earned that I might be regarded as an example of the rule which I have often tried to impress on pupils: That any one with a safe knowledge of his profession, and free from such faults as I have enumerated, may be as certain of success in the practice of medicine or surgery, or both, as in any other business in life."

With the honors of his later life, his friendship with the great men of the century, the royal patients, his title, and his fame, all physicians are familiar, but it is a delight to read of the gradual attainments of the rewards for his incessant indefatigable work and patience, for one cannot help but feel, after this intimate revelation of his daily life, that he was as lovable as he was clever, and that he was as great as he was famous.

A PRACTICAL GUIDE TO THE ADMINISTRATION OF ANESTHETICS. By R. J. PROBYN-WILLIAMS, M.D., Senior Anesthetist and Instructor in Anesthetics at the London Hospital; Lecturer on Anesthetics at the London Hospital Medical College; Assistant Anesthetist at the Dental Hospital of London. Longmans, Green & Co., London, New York and Bombay.

To furnish a book on anesthesia which is more brief and accessible than the larger works of Hewitt or Buxton is the design of the author. The opening chapters all too briefly consider the effects of normal anesthesia, the various stages of general anesthesia, and the difficulties and dangers attending it. Nitrous oxide, ether, chloroform, and their various mixtures are given long and important chapters. The author considers ether safest in abdominal surgery, but finds that in some operations the deeper respiration caused by ether is troublesome to the surgeon, or a long operation may be accompanied by such excretion of mucus and saliva as to increase the danger of bronchitis or pneumonia. Then, too, ether stimulates so much that when its effect is worn off a grave condition of collapse may supervene. He recommends beginning with gas and ether and changing, after half an hour, to the A. C. E. mixture, or even to chloroform. The use of anesthetics in midwifery is dismissed in two paragraphs. The author gives the anesthetic which he prefers at different ages, and closes with a very brief chapter on local anesthesia. Undoubtedly this book is a good one for the student to have, and experienced men may glean from it valuable suggestions.

TRANSACTIONS OF THE AMERICAN OTOLOGICAL SOCIETY. Thirty-fourth Annual Meeting, July 16, 1901, Vol. VII. Published by The Society. Mercury Publishing Company, Printers, New Bedford, Mass. 1901.

THIS number of the Society's Transactions contains the portrait of the lately-deceased Dr. Henry D. Noyes, a life-long member and one of the founders of the Society, whose memorial, written by Dr. Gruening, accompanies it.

The ten papers presented were not of that absorbing interest which one would naturally expect in papers read before the representative national society. The herpes cases associated with mastoid disease and ending in death from meningitis make valuable records, though no attempt is made to explain them. Knapp's cases of sinus thrombosus are in the full tide of advanced work in aural surgery and they elicited full discussion.

The usual Index of Otological Bibliography is really the most valuable feature of the volume.

MANUAL OF BACTERIOLOGY. By HERBERT W. WILLIAMS, M.D., Professor of Pathology and Bacteriology, Medical Department of the University of Buffalo. Second Edition, Revised and Enlarged. P. Blakiston's Son & Co., Philadelphia.

THE second edition of this manual appears within three years after the issue of the first edition. The writer regrets in the preface to the present edition that the additions to the text deemed advisable by the progress in bacteriology necessitate a slight increase in the size. The idea has evidently been to keep the book strictly within the limits of what deserves the designation "manual" and this has been quite successfully accomplished. The little work is for its size as complete as could well be desired and yet it is no mere dry collection of facts and principles, but a tempting morsel out of the heart of advancing science. Some of the illustrations do not seem to serve any definite purpose in adding to the value of the book.

BOOKS RECEIVED.

The MEDICAL NEWS *acknowledges the receipt of the following new publications. Reviews of those possessing special interest for the readers of the* MEDICAL NEWS *will shortly appear.*

OUTLINES OF ANATOMY. By Dr. E. W. Holmes. Demi 8vo, 182 pages. Second Edition. New Era Printing Co., Lancaster, Pa.

LECTURES ON CHEMICAL PATHOLOGY IN ITS RELATION TO PRACTICAL MEDICINE. By Dr. C. A. Herter. 8vo, 461 pages. Lea Brothers & Co., Philadelphia and New York.

A SYSTEM OF PHYSIOLOGIC THERAPEUTICS. Edited by Dr. S. Solis Cohen. Vol. VI., Dietetics. By Dr. N. S. Davis, Jr. 8vo, 372 pages. P. Blakiston's Son & Co., Philadelphia.

DIRECTIONS FOR CLASS WORK IN PRACTICAL PHYSIOLOGY. By Dr. E. A. Schäfer. 8vo, 76 pages. Illustrated. Longmans, Green & Co., New York, London and Bombay.